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Testimony relative to the Vocational Education Improvement Act Amendments of 1967 as given in three committee sessions is presented in letters, and supplemental materials. Major prepared statements were by (1) Lee W. Ralston, (2) Margaret L. Crawford, (3) David Allen, William McCann, (5) Glen Guldberg, (6) Joseph H. Stephenson, (7) Ronald Regan, (8) The Regional Conference on Education, Training and Employment, (9) Seymour L. Wolfbein, (10) Samuel C. Kelly, (11) Joseph E. Casey, (12) John A. Sessions, (13) Eli Cohen, (14) Frank J. Dressler, (15) Gerald Leighbody, (16) George Brandon, (17) The Research Council of the Great Cities Program for School Improvement, (18) Samuel C. Bernstein, and (19) Eldon E. Ruff. The Chicago session included testimony from students at local vocational schools. The appendix contains other letters and statements relative to the amendments and vocational education. Also included is "Automation and Technology in Education, A Report of the legislation are reported in VT 006 271 and VT 006 273. (EM) Congress of the United States," August 1966. Other hearings on the same legislation are reported in VT 006 271 and VT 006273. (EM) c

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VOCATIONAL EDUCATION IMPROVEMENT ACT AMENDMENTS OF 1967

HEARINGS

BEFORE THE

GENERAL SUBCOMMITTEE ON EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR
HOUSE OF REPRESENTATIVES

NINETIETH CONGRESS

FIRST SESSION

ON

H.R. 8525 and related bills

A BILL TO AMEND THE VOCATIONAL EDUCATION ACT OF 1963

HEARINGS HELD IN LOS ANGELES, CALIF., APRIL 22; CHICAGO, ILL., APRIL 28; SOUTH BEND, IND., APRIL 29, 1967

3a **PART 2**

Printed for the use of the Committee on Education and Labor
CARL D. PERKINS, *Chairman*

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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VOCATIONAL EDUCATION IMPROVEMENT ACT AMENDMENTS OF 1967

SATURDAY, APRIL 22, 1967

House of Representatives,
General Subcommittee on Education
of the Committee on Education and Labor,
Los Angeles, Calif.

The subcommittee met at 9:30 a.m., pursuant to notice at the Los Angeles Trade-Technical College, Los Angeles, Calif., Hon. Augustus F. Hawkins, presiding.

Present: Representatives Hawkins and Mink.

Staff present: Mattie Maynard, clerk.

Mr. Hawkins. Ladies and gentlemen, it is my pleasure to welcome you to these hearings on the revision and extension of the Vocational Education Act of 1963. Since my election to Congress in November, 1962, I have served on the House Education and Labor Committee and have been actively involved in this extremely important field of education legislation.

The vocational education program in California has consistently, over many years, been the largest in the United States and our State receives the largest allocation of funds under the Vocational Education Act of 1963.

Testimony before the General Education Subcommittee during hearings last year on similar legislation indicated that the 1963 act, almost overnight, influenced the greatest surge of vocational education activity in the entire history of our State. New programs by the hundreds and new enrollments by the thousands are but two measures of this influence. Vocational education has been accepted as an essential part of our State's school program, and has been a strong contributor to the State's economic strength.

However, I believe that there are areas of the program that need expanding and strengthening to upgrade our vocational education system, both at a State and National level, to make it more responsive to the current needs of our society.

During 3 days of hearings on this legislation in Washington earlier this month, our subcommittee heard testimony from a variety of witnesses, including administration spokesmen; representatives of the American Vocational Association; the American Association of Junior Colleges; school administrators; State vocational education directors; universities; as well as representatives of the private sector. One of the witnesses on Monday of this week was Mr. Fred Cushing, vice president of Macmillan Co. and President of Glencoe Press of Los Angeles, its subsidiary, which is totally devoted to the development, validation and publishing of teaching systems for vocational education, with special emphasis on the community colleges which we in California feel are so important. Mr. Cushing's testimony was directed toward the contribution that the private sector can make in this very important field if proposed amendments of my bill, H.R. 8527, which would expand and improve provisions of the present act permitting the participation of the private sector in research and demonstration programs in vocational education, are adopted.

Witness after witness emphasized the need for the adoption of new ideas and concepts of training to meet today's challenges. Involvement of the private sector would certainly make a significant contribution to the achievement of this goal.

Further, it is the hope of most of the members of our subcommittee, including myself, that we can strengthen and expand the work-study program, rather than to phase it out into the Neighborhood Youth Corps program, as suggested by the administration; establish a teacher training program specifically for vocational education teachers; and revitalize the residential vocational school program, which was authorized under the 1963 act, but which has as yet received no funding.

California, and particularly the Los Angeles area, is the heart-land of the open-door, post secondary, community college concept. Much has been done in the Los Angeles Trade and Technical College and similar schools to develop continuing education programs to meet today's needs. Their programs have been of particular service to our young school "drop-outs" in rephasing them into the educational system and given them an opportunity to become productive members of our community. Equally important are the adult education programs offered in these institutions for the training and retraining of our adult citizens.

I am confident that our hearings today will make a significant contribution to the efforts of this subcommittee to enact legislation that will continue and increase the forward momentum in this very important educational field and upgrade the status of our vocations as we did, many years ago, our professions.

I certainly agree with our Chairman, the Honorable Roman C. Pucinski, when he said, "Improving and expanding vocational education is one of the most important issues before this session of the 90th Congress.

"If we can accomplish this, we will have made a significant contribution to the well-being and strength of our community, our State and our Nation."

I thought I would read that statement in order to bring into perspective the direct functions we are attempting to accomplish in these hearings.

It is my pleasure at this time to introduce to you a most important member of our subcommittee, one who is certainly outstanding in the field of education, the honorable Congresswoman from Hawaii, Mrs. Patsy Mink.

We also have as part of the staff of the subcommittee Miss Mattie Maynard who has also come out with us from Washington.

It is my understanding that there are several individuals who must get away as early as possible. I think they were scheduled this morning anyway.

Mr. Wesley Smith will be the first witness, but may I ask the several individuals who must get away as early as possible—someone had suggested to me that Mr. Ralston must leave.

With that, and certainly as a followup of the statement, it is my pleasure to introduce as the first witness an old friend and certainly one who has been one of the main contributors to the great growth of vocational education in our State, and one largely responsible for the position which we now occupy in this field as a State, Mr. Wesley P. Smith, director of vocational education, California State Department of Education.

May I say to the witnesses, in order to try to accomplish as much as possible today, we will be very appreciative of a summary of statements wherever possible, and then the entire statement that you have prepared can be entered into the record just as you have prepared it, and then you might summarize, and through the question and answer period we probably can accomplish a lot more.

If you prefer to read the statement, it is perfectly all right with us. I am simply suggesting that you make your presentation as you wish. If you wish to summarize it, obviously, we will then print the entire statement in the record.

Mr. Smith.

STATEMENT OF WESLEY P. SMITH, DIRECTOR, VOCATIONAL EDUCATION, CALIFORNIA STATE DEPARTMENT OF EDUCATION

Mr. **Smith.** Congressman Hawkins, and Mrs. Mink.

I do not have a written prepared statement. I am going to speak informally and briefly from some notes that I have prepared.

I would, I think, be remiss if I didn't at the very beginning express appreciation on the part of all of us who have anything to do with vocational education to Mr. Hawkins for his continued constructive support of all the things we stand for and all the things we attempt to do. I don't know what we would do without such friends as you, Mr. Hawkins, in California.

It is a courtesy in permitting a hearing to take place in California, where some of your colleagues can talk with you, and greet you and Mrs. Mink. We are most grateful for this opportunity.

I guess if I were to say anything at all, it would be our fondest hope—as I represent vocational education, I am sure all would join me in saying this—that all of us in vocational education, our fondest hope would be that we would continue to merit your support and your confidence.

I notice that your hearings are specifically on H.R. 8527. I would imagine, however, Mr. Hawkins, I could move away from that particular legislation and talk generally on vocational education.

Mr. **Hawkins.** Mr. Smith, may I interrupt long enough to say to you, as well as to the other witnesses, while the specific hearing is on H.R. 8527, that we would just as well welcome broader statements than just the revisions of 8527, or any other bills, including the administration bill.

Mr. **Smith.** Fine.

Mr. **Hawkins.** The committee is very flexible in that regard, and we are perfectly willing for the witnesses to handle the subject as they see fit.

Mr. SMITH. There will be a number of people who operate programs under provisions of Federal acts who will follow me and give specific information to the committee.

I think my role here is to comment on an overall basis regarding the nature and the effects of this program in California.

I feel that in deference to the limit of time you have, I might refer very briefly to a few comments that I made to Mr. Perkins' committee when Mr. Perkins was chairman of the committee about 6 or 8 months ago in Washington. I indicated that at no time in the entire 50-year history of Federal-aided vocational education in California has there been more excitement, more interest, more enthusiasm, more support, more participation than there is these days, and I must credit the stimulation given by the Congress to this program for this situation.

We are just completing the third full year of operation under the provisions of the Vocational Education Act of 1963. I would comment to this committee without at this point giving you a lot of specific statistics, that our program has grown in every possible way. New curriculums have been developed, new occupations are being served.

I would comment that at least 100,000 people this year are being served specifically by the provisions and the benefits of this act or this program more than were served the previous year; that at the present time during this school year some 750,000 youth and adults in California are participating in the program of vocational education partially funded by the Vocational Education Act of 1963, the Smith-Hughes Act and the George-Barden Act.

Not only has there been a measurable increase in the numbers of persons served by the vocational education programs, but the traditional areas of vocational education have been strengthened because of the benefits of these acts, and updated programs have been extended at all levels: the adult education level, the high school level, especially, and junior college level.

We find the program is now beginning to move into some areas of service to people in California that, for one reason or another, have been previously denied the opportunities of vocational education.

I would say that, generally even though one looks at 750,000 people and says this is a lot, members of the committee, you must know that in this State, even with this marvelous record, that for every person now being served by vocational education no less than one person is going unserved.

I would comment further that these going unserved, without question, often need the benefits of vocational education even more than those being served.

So, there is yet more to be done than has been done.

As I said a minute ago, I would give credit for this surge of interest and activity to the Congress because of the high priority the Congress has placed on this segment of the curricula and for its generous funding.

While some of us may give credit to Congress and give credit to the U.S. Office of Education and take credit ourselves in State departments of education, the real credit for redesigning and for augmenting and further developing vocational education must go to the school districts, the cooperative relations between industry and management and organized labor, the public sector, the private sector, because these things don't just happen, they have to be planned and have to be worked out, and the action is in the local community, and you are going to hear from some of those people.

Mr. Chairman, no prior Congress has been more provident in providing vocational education funds. With that statement, might I, with some hesitation, suggest that the Congress might give attention to further funding of vocational education?

I don't want to seem to be an ingrate as I speak for the vocational education needs in California, but it is a rather pleasant thing to see that in your particular legislation and in, we hope, other legislation, the funding for vocational education—the authorization, at least—is almost doubled.

As I say, I don't want it to seem that I am an ingrate. We recognize this has been the most generous Congress, but at the same time we need more money.

Limitations to the further development of vocational education in California are not in the language of the existing acts because Congress has resisted the temptation to place all the requirements in the statutes and has given us more freedom to devise programs of vocational education on the community-need basis than any prior Congress.

We have said that the Vocational Education Act of 1963, and other acts based upon this premise, are truly the Magna Charta for vocational education in California, and the first time in our long history we have been given the freedom to be architects of programs as well as the actual builders. To my knowledge, there is no signifinant detriment in present language to the further development. Further development is limited only by our own innovation, our own energies, and some limitation of money.

May I comment now somewhat specifically on two or three problems that face us.

I have singled out probably the one that is really bothering us more than anything else at this stage. It has to do with the work-study program authorized in the Vocational Education Act of 1963 for a period of years, funded on two prior occasions by Congress, and recognized in H.R. 8527 as meriting further use. This is the part of the vocational education support that makes it possible for full-time vocational education students who have economic needs, such needs that if they are not met there is a likelihood the student will drop out of school and drop out of vocational education program, and thus, without question, handicap themselves in an economic sense for the rest of their lives.

One of the most satisfying Federal-aided programs in this State has been the work-study program. It was an instant success program with measurable benefits. Even in the second year of operation when the requirements went from 100% Federal funding to 75% Federal funding and 25% local funding and that local funding was not in kind but was cash on the barrelhead, every cent of money that came to us was obligated, and we have long lists of requests from school districts asking for more. There are districts here to testify to this.

When the time came, and it came as a great shock to us, that in the middle of this authorization period when we had been promoting the development of the work-study program, school districts had become dependent upon it, as had students, all of a sudden in the President's budget for 1967–68 there was an elimination of all funding for the work-study program with the suggestion or comment that this program could be absorbed by the neighborhood youth corps and other programs.

Well, there is some problem in this area. In the first place, there were no new funds given to the Neighborhood Youth Corps for this purpose. Regardless of our pleasant experience with the neighborhood youth corps program, we cannot agree with the President that this is a proper transition.

Our prediction in California is that the support for the vocational educational students and the means whereby these students with great economic need to be able to stay in school will dry up in this year, and there are people here who will testify to this.

We feel in all sincerity that every means should be taken to have a restoration of these funds. We get an awful lot of mileage on them, and we have case studies by the thousands to indicate the advantages.

Now, I want to change from that to a section in your bill, Mr. Hawkins, and in the administration H.R. 6230, title II, which has to do with the addition of some $30,000,000, or the additional authorization of $30,000,000 for innovative occupational education programs or projects designed to serve as models for use in vocational education programs.

I would like to say in general that this is one of the finest breakthroughs we have seen for a long time. It is a splendid program, and we are in favor of it 100%. It has features in it that we have just wished for, the exploration of programs of readiness at the junior high level, work experience education. These are programs we have tested in California and want to test more. We think they have great potentiality.

But there is one section that some of us dislike very much, and this dislike is especially at my level as a representative of the State board of education in California and the State department of education, and that is in the administration bill that has to do with section 201, lines 18 through 24, which I am going to read. They are talking about this $30,000,000, and it says:

> The Commissioner also make grants to other public or non-profit private agencies, organizations, or institutions, or contracts with public or private agencies, organizations, or institutions, when such grants or contracts will make an especially significant contribution to attaining the objectives of this subsection.

Your bill, Mr. Congressman, has some similar language in it.

Now, my point of concern is this: this is a means whereby the U.S. Commissioner of Education can make direct contracts with local agencies and local institutions, leapfrogging, so to speak, over the organizations and agencies which have responsibility for coordination.

You know, the administration, through other acts, is attempting to strengthen departments of education. California benefits from this over a million dollars a year, to strengthen its State department of education.

It is my feeling every time the Commissioner of Education is permitted to make a leapfrogging, unilateral direct contract with a local board in an educational matter without conference with, without coordination with—and I am not necessarily asking for approval—the

State board of education, that very act weakens the State department of education rather than strengthens it.

Now, I think it is all right for the U.S. Commissioner of Education to determine whether or not proposals have merit and whether or not they should be funded, but this should be done with the knowledge of the State board of education and in accordance with, to the degree possible, the State planning that is so necessary these days.

I am bearing down on this because we have had some experience with the section 4(c) of the Vocational Education Act of 1963 dealing with research funds. Millions of dollars—I guess last year $15 million, the year before I guess California has received over a million dollars a year under this act in research grants.

Research in this provision is one of the finest breakthroughs we have had in vocational education. We are just getting used to research, and we need it so desperately.

But our experience has been when the U.S. Office of Education or the Commissioner makes these grants—I am not going to use the strong word such as "promiscuously," because I don't think it is promiscuous, but without the knowledge and without reference to anything that is going on in the State where maybe 6, 8, 9, or 10 months after he has made a grant to an institution or organization in California, by coincidence we find out about it in California. I think this is too bad.

I am biased here. It may be the Office of Education can't trust some States to take care of the innovation, and they can't have confidence in these other States, and they can't be depended upon. As a proud native of a very proud State, I have to consider a procedure such as this as an affront to those of us who are attempting to coordinate in a program that is as so complex these days because there are so many people in the act, so many people in the vocational education arena, and when from Washington we have these leapfrogging contracts without some coordination with the State people, this makes our task even more complicated.

I feel not only that it is an affront, but I count is as an unnecessary encroachment upon the prerogatives of the States, especially in these days when we have so much fragmentation and so much confusion along these lines.

I move now to a quick comment on one feature of Mr. Hawkins' bill, H.R. 8527 which should receive the highest possible priority. It has to do with section 15 in the general area of preservice and in-service training for teachers and leaders in vocational education.

I said earlier it isn't the law or statutes that limit us in the further development of vocational education; it is our own initiative, our own imagination, our own innovation and dollars.

One of the limitations that we have run into recently, though we have known about it for some time, and we confess it to you because I think you would understand it, that is, a friendly supporter of vocational education would understand it, we have had difficulty to accommodate all of the needs to develop vocational education because we have—I won't call it a dearth, but I would say there has been need for further development of teacher competency and leadership competency over the country, in this State as well as others.

We are hard pressed to find the teachers who can do the kind of jobs in vocational education that need to be done, and we are hard pressed to keep those teachers even up-to-date within the occupational areas in which they teach.

Any vocational education program is no better than the competency of those teachers, either professionally or subject-matter wise.

In these days in all occupational areas one of our most difficult tasks is to maintain the competency of the teacher after the teacher has been inducted into the classroom.

So, this area, this thrust of specialized attention to do something for further developing teacher competency and leadership is the next big breakthrough in vocational education. I could talk a long time about it.

I think, Mr. Hawkins, and Mrs. Mink, this will conclude my statement.

I sometimes marvel that a piece of legislation which was introduced, the Vocational Education Act of 1963, some 3 or 4 years ago, is so complete and so lacking in fault. We would be hard pressed to point out to you any really significant faults in this legislation. We have to pay credit to Congress and to the designers of this legislation for their forbearance in not being so over specific that we ran into difficulties in implementing it.

We are just well on our way. There are people here to tell you how well they are on their way because they are the people who do the actual work. We try to stand to one side and let them work at it.

Again, it is always a thrill for me to appear before a congressional committee. I count it as an honor. As the day goes on, I intend to be here all day, if you would have any questions regarding this testimony—and I will prepare a statement for you if you would like to have one along this line.

I apologize for the raggedness of my presentation. I am sure I haven't covered everything, but you have a long day ahead of you.

Mr. HAWKINS. Thank you, Mr. Smith, for a very excellent statement. It is possible there might be a few questions at this time.

Mrs. Mink.

Mrs. MINK. Thank you, Mr. Chairman.

I was concerned about your strong words of advice with regard to the authority of the Commissioner in Washington to make grants to other than public educational agencies under the section dealing with exemplary and innovative programs.

I wondered if you had any observations with respect to your own position now as head of the State organization for the section just prior to that which also authorizes the Commissioner to make direct grants and contracts with local educational agencies.

Mr. SMITH. I am awfully glad you asked, because this was not my intent.

My intent went to the first part as well as the latter part. My intent, too, was to decry the means whereby the Commissioner makes any local grants without conferring with—it has nothing to do with whether they are a private or public, or any other kind of institution, I think they are all in the picture—it is the manner in which the Commissioner is able to make direct contracts within my State in vocational education without the knowledge and without the consultation and without the advantage of planning and without some assistance.

Not that we have to sign off on it, not that we have to approve his action, but we would like to know about it. I use our experience in section 4(c) research provisions of Public Law 88–210 as an example. We have to almost set up a research unit to find out what the Commissioner does in the area of research in our State in our program. That is pretty strong, I realize, but it is a fact.

It did not bear upon whether it is a private or public agency. It is the problem of leapfrogging without the knowledge and cooperation of the State agency that is in the picture.

Do I make myself clear to you now?

Mrs. MINK. I take this section in Congressman Hawkins' bill to be a parallel of section 3 under title III of the Elementary Secondary Education Act which provides for an advisory council and committee which must consult with the State organization, and, actually, I think in many cases this advisory committee makes the recommendations as to what research proposals and other innovative programs are to be recommended for grants to the State or local agencies or to nonprofit groups.

I wondered if in thinking this out whether you wanted to make specific now a recommendation for the establishment of this same sort of advisory and consultative agency as we now have under title III of the Elementary and Secondary Education Act.

Mr. SMITH. I said this to the advisory committee when the policies and procedures were being developed for the implementation and revision of Public Law 88–210, and the then Commissioner promised whenever he did make direct grants he would do it in consultation—somewhere along the line this was lost in the shuffle. I am not saying it is the State's money; it is Federal money allocated to the State on entitlement basis. It is my feeling the State has an interest in how that money can best be used working with the Commissioner, not replacing the Commissioner.

So, that provision would be fine, and I don't know why it has to be written in the law. When it is not written in there, and when a reference is made to it, we worry a little, because we don't know the Commissioner, and this is without, may I quickly say, reference to the present U.S. Commissioner of Education. I am not talking about him personally. It is the system. I think maybe he will correct the system when he gets around to it.

Mrs. MINK. The method for coordinating with the State departments of education under the Elementary and Secondary Education Act is quite different. In title III it calls for an advisory committee being set up. Under title I there is direct procedure in which the grants and proposals and applications are in fact submitted to the State departments of education.

In reviewing these two structures as they differ in title I and title III, which is your preference for inclusion in the vocational education section dealing with innovated programs?

Mr. SMITH. I am not sure I understand both of them, but I like the latter where the State is asked to prepare a specific plan as to how it would make use of these funds according to the instructions and intent of Congress, and then the Commissioner reviews those and sees whether or not he shares that this manner in which the State intends to use the funds meets with his approval.

I like the latter.

Mrs. MINK. That is the title I method?

Mr. SMITH. If I understand the title I, where a plan or a proposal from the State is presented to the Commissioner. I would give the Commissioner a little leeway, because there may be some instances in some States, there may be some instances in my State during some periods in my State when he needs to take unilateral action, and I would like for him to have that opportunity, but I think we should have the opportunity to help him before he takes this, and he could take it only when there has been a breakdown in our own capacity.

Mrs. MINK. This is, I think, the most challenging of all the methods we have and can present the most direct benefits to our vocational education administrators. We have a delineation in the bill as to the types of programs and projects which might be included.

Now, this is not always exclusive of all others, but it suggests a direction of the kinds of programs and grants that would be given greater consideration than others.

So, for this reason, it has always been a concern to the committee as to what we actually specify and include as programs which be included, and I wondered if in your experience whether the four items listed in the bill—

> (1) dealing with programs to familiarize postelementary students with occupations;
> (2) programs dealing with work-study;
> (3) guidance and counseling; and
> (4) broadening and improving curriculums.

Whether in your experience this delineation of the four programs which might be included is sufficient to cover the kinds of things you have in mind in terms of how the funds might be used under this section?

Mr. SMITH. Certainly. I am quite certain of that. We need this embodying language from Congress. Congress has picked up the information on an objective basis. I am quite certain that these are areas that need special attention.

Mrs. MINK. Are there any others you might suggest that might have been excluded?

Mr. SMITH. One of them, of course, is included as a matter of specialized provisions for this difficult period in vocational teacher education and preparation of instructional capacity in vocational education. I think that is in there.

Mrs. MINK. That is treated in another section dealing with quality of education.

Mr. SMITH. Yes. I think it is in there.

No; I think not. I think at least at this time we would like to make a good try at that, because we need to have our goals delineated, and we can't do everything at once, and we would sure like to work on it.

Mrs. MINK. The other section deals with residential programs.

Does the State of California now have any residential vocational education?

Mr. SMITH. Only at the correctional institutions. We have no others.

I don't think I would care to comment to the committee regarding residential schools. I am not competent in this area. I haven't been in one. I don't know too much about them. I imagine there is a need.

There are others who are much more capable than I to speak about this. I have not been one to press for this aspect, one of the reasons being I don't know whether we will ever have enough money to take care of all of this kind of operation, and to select five or six or eight hundred youngsters, we are doing a fine job for those eight hundred. I worry about once we do this then the attention might be withdrawn from the others who aren't served.

I have the same point of view about separate vocational schools. Once a separate vocational education school exists, it is possible for the comprehensive schools to say, "Now we have a school for vocational students, and we don't have to do anything in ours."

This is somewhat philosophical and personal.

I am not one of the pushers for the residential schools, but this is out of ignorance and not out of knowledge.

Mrs. **Mink.** My last question has to do with the teacher education programs. I am not too familiar with the needs in the State of California, but in my own State this is a very critical problem, trying to get competent teachers into our vocational institutions as such, and, also, to meet the academic teacher requirements in our community college complex which is now devoting considerable attention to vocational training.

I wondered what the existing program is like now in the State of California with respect to specific training of teachers for your vocational institutions.

Mr. **Smith.** This varies, of course, with the number of different kinds of occupational areas. In the whole office occupational fields and distributive occupations, we have rather fine extensive programs for the preparation of these people in all the State colleges and in private institutions and in the university.

Mrs. **Mink.** Could you comment where your specific urgent needs are?

Is it in the business field, or is it in the more technical or in the subprofessional field, or just where in your estimation?

Mr. **Smith.** I don't know where an area would not be critical.

For instance, I came just last week from Long Beach where I visited some of the business educational programs. One of the greatest needs, keeping the teachers of the business subjects in tune with the changes going on in the business community, and it goes far beyond merely some of the mechanical hardware changes that are going on.

The processes of business, the change in the economic structure, there are so many things that need to be imparted to these people.

Of course, the industrial field and technical fields are changing outside the campus so fast that we can't keep up with them.

You are going to hear some more from teacher training. One member of our staff is here, Dr. Allen, and he can talk to you about the field of trade and technical.

My background happens to be agricultural, and I know the difficulty the agricultural teachers are having in maintaining any semblance of of competency. Not in the specific skills because we can't do that, but in just what is happening to agriculture in this State. It is awfully hard.

You know, it is almost like being on a tiger's back. We don't have the time; we don't have the leisure enough to send a teacher to get him out of the classroom long enough to be refurbished. He has to keep on teaching plus learning, and it is difficult for him to do, and I don't think we have all the answers.

Rather than pick out one area, I would say all areas are critical, and not only in teaching, but in the administration or the leadership, the development of vocational education programs, curriculum development, the identification of training needs, mounting new programs and seeking out some innovations in teacher training.

Mrs. MINK. As I see the need for continuing education, there are really two facets to it. One is the continuing problem of upgrading and keeping current both teachers you now have in your system, and the necessity for teacher institute programs within the institutions to maintain this excellence and quality of background.

The other problem is that of attracting new persons into the system, and I suppose the greatest resource really is from the private sector of our community, whether it be industrial or governmental agencies, and the need in that area is very different. It deals directly with the problems of meeting the educational qualifications for licensing and so forth to become a part of this system.

The salary structure, the length of the training period required, and the amount of stipend needed so they can go back to an institution for this educational background and still not suffer a great financial hardship, are important aspects of this problem.

My own personal opinion is that this section needs to address itself more specifically to this obvious division of the problem and we should perhaps divide the funds into two sections, one dealing with inservice training to upgrade the teachers, and, second, dealing with problems of bringing persons from the outside, giving them the educational background in some other institution also that can become a part of your vocational education institution.

With respect to that latter problem it has been suggested in the hearings we have had on this bill in Washington that perhaps the training program ought to be direct grants to institutions of higher learning for the specific purpose of giving these people a concentrated program in education so they can enter the vocational education system as trained teachers.

I wondered if you had any comment about this amendment, whether you would favor it, or if you see any need in dividing it into these two areas.

Mr. SMITH. No. I think your intent would be sharpened if you did this. Our feeling is the role of teacher education is the role of higher education. I think we have a responsibility in, for instance, the Department of Education to see that this is done. It is a very complicated area in vocational education, and I know a lot of people accuse us of being different, and in a sense we are. We have a double standard where in vocational education we insist in our State no person can teach in a funded program and under our State plan unless this person has had no less than 2 years of successive experience in the occupation he is teaching. Our richest source are people who have been out in business and industry and then maybe wanted to be a teacher, and we get them to come in to teach.

Now, we can't send those people to school for 2 years to get the professional part.

This is why you will hear from Dr. Allen. We have a plan, and it has been working out beautifully in the industrial field and other business occupations and agricultural occupations where that person is immediately placed in the classroom and then is surrounded, or not maybe surrounded, but immediately there is a companion concurrent program of the professional part invoked either provided by the school or provided by an institution of higher education.

Our problem in California—and I don't know the situation in other States—is that there has been some disinterest or lack of interest on the part of higher education to take on this task of doing something specially for vocational teachers. They seem to be more inclined to want to assist in keeping a math teacher abreast of new math, and an English teacher abreast of new English because of concern or worry that they aren't capable in those subject matters, whereas the subject matters in vocational education are so wide they haven't really taken on the task of being supportive of the occupational sector, and maybe this kind of a grant, this kind of identification, this kind of sharpening of need focus would be helpful to strengthen their desires if they have any.

Mrs. MINK. Thank you very much, Mr. Chairman.

Mr. HAWKINS. Mr. Smith, may I ask you to comment on this situation. One of the main thrusts of H.R. 8527 is to upgrade vocational education, obviously, but we have the situation prevailing today in which the teenage unemployment in culturally deprived areas is about four times the rate of the general unemployment rate.

Kids are dropping out of school. Eight out of 10 do not go to college, and despite all our programs which we have attempted to adopt at the congressional level and put into operation in the State at the local level, somehow or other these kids are not attracted; they are on the streets and getting into trouble.

Do you believe that many of them are not attracted into vocational education either because of insufficient funds or because this seems to many of them to be merely training for dead-end occupations?

To them vocational education has not been identified as something exciting, something which has a future, something which offers real creative opportunities.

I am wondering whether or not, in the appraisal you have been able to give to this proposal and the others, you think we are moving in the right direction, and what specific advice would you offer as to how we can make vocational education something which will attract these teenagers who today end up in the statistics of being unemployed and getting into trouble?

Apparently, we are not attracting them for one reason or another. What do you think is the reason?

Mr. SMITH. There is no easy answer, Mr. Hawkins, as you know, but I would make a few observations along this line.

There have been, I think, in vocational education a kind of preoccupation that we have had in vocational education for a long time to provide programs on a widespread basis, without specific attention to the exclusive needs of certain groups. Too, all of our training capacity isn't being used.

With apologies to Hawaii, and none to other States for the moment, this college in which we are meeting today is the finest institution in the country. Even so, this institution has no doubt hundreds and hundreds of training stations that are going unused.

We have long felt that making vocational education programs available was our sole responsibility, and our responsibility stopped there. We have found that merely making programs available without the students or the youth or adults making themselves available is making something available in a vacuum.

I think more and more vocational education in this State is taking a new tack, and while we are attempting to keep the ongoing programs mounted, we are also deliberately designing new approaches, and revising our methods of taking the programs, and getting people interested in the programs.

We find in the case of people you have mentioned who need vocational education so desperately, it isn't that they can't participate successfully in vocational education, it is for some other reasons. Somewhere along the line we and our colleagues in education and in the communities have not done the job of changing our processes or procedures so that we are assured there are more persons available for that training.

You know, Mr. Hawkins, some of the fine vocational education programs are in the backyards of people in California who need the benefits of the programs so desperately.

Thank goodness, we are no longer thinking that our job was done if we make the program available and open the doors, and that its students don't come in, that is too bad.

Mr. Hawkins. Assuming the program is available, what specific counseling and guidance is given to these young people, and at what levels should it be given to encourage them to go into vocational education?

I find that many of them do not know anything about the opportunities. They are not particularly interested. Many of them even graduate from high school and have been involved in academic courses that lead to college, but they are not headed for college.

Is there anything that can be done, or is there any suggestion that you would make as to how counseling and guidance at that level should be strengthened? Should we begin in the junior high school level, or should we begin in the senior high school level at least to interest a young student in making some decision?

This bill attempts, of course, to reduce the period, that is, to move it up to make it possible at an earlier level in the educational process to begin to interest the student, not to assign the student to whether that student is heading for college or into the vocational education, but at least to raise the issue to create in that student an interest and to at least let the student know these opportunities exist quite apart from whether the student is headed for college or not.

Would you agree with that?

Mr. Smith. Yes. I think a step has been taken by making it possible to fund programs under the act for seventh, eighth, and ninth grade students.

This is only a part.

I think it is not starting too late at kindergarten. From kindergarten on there should be some systematic constant attention to the need for people to become more knowledgeable about this whole very complex occupational structure that we have in this country.

Now, I think the times are changing and so this is going to be done. I think that is influence from the outside. There was a time when all you had to do was grow up and get big enough and you became employable. This is no longer true for thousands of young people. Furthermore, there was a time when we could make a number of false moves in our livelihoods and in our career choices in making changes, but increasingly, because of the rupture of the occupational requirements, a false move now could really be a detriment to a person economically for the rest of his life.

What I am saying is for the vocational education guidance people and for the elementary curriculum people, and I would say guidance delayed until the seventh, eighth, or ninth grade or high school is like locking the door after the horses have been long gone.

The need to understand the world of work, if you pardon that expression, is an essential part of the general education of every young person.

I am not very articulate on it, but I certainly share the feeling that you can't wait until youth are in high school or junior college or adults and then, or a remedial basis, try to get them into vocational education.

Mr. Hawkins. The only other question I have goes to the proposed change in the ratio of the matching funds between the Federal Government and the States and the expansion of the program in H.R. 8527. We are very anxious to make sure this is not a maintenance of the status quo. The fact that this bill proposes to increase Federal support, that this increased financing is not going to be lost by reductions at the State level.

In your opinion, the changing ratio and in providing of additional money, will this result in ending up in the same amount available, or do you believe this liberalization will encourage additional State funding?

Might I hasten to say I have been quite pleased at the fact the history has been that the States have increased—particularly our State—have increased its appropriation despite the increased Federal appropriation. I hope this would continue.

Do you believe this would increase it at both Federal and State level and not reduce it?

Mr. Smith. Your requirement in the act that there never be any supplementing of local funds with Federal funds is sufficient. There will be always a need for more money than the Federal Government money, and the Federal money is often considered to be stimulation money, seed money, and development money.

I am sorry to report to you that at the State level the thing that you indicate has not been true. The overmatching that is taking place in this State and the increase of expenditures in this State is at the local level and not at the State level. There has been an inclination for several years now for the State legislature, for the State administrations, to anticipate Federal funds for vocational education in lieu of additional State funds.

I would report to you that in the State of California there hasn't been 1 cent of increased revenue for vocational education appropriated by any legislature for 12 years. The level of State funding for vocational education in California is no greater today than it was 12 years ago.

The funding by local districts is such that any figure that you give always puts California way at the top, but it has always come out of local districts and not out of the State of California.

So, I am reporting two situations. One in which the State hasn't withdrawn any funds, but also hasn't made any additional effort—at the State level.

Mr. HAWKINS. I think it is a significant point. I hope, Mr. Smith, you could furnish to this committee the information, let's say for the past 10 or 12 years, the amount of money allocated at the State level, the local level, and the Federal money that has been received.

Mr. SMITH. I will do that.

Mr. HAWKINS. I think that would be good material to have in the record.

Mr. SMITH. It doesn't speak well for this part of the program, but the total effort in California is still a total effort.

(The material referred to follows:)

CALIFORNIA STATE DEPARTMENT OF EDUCATION, VOCATIONAL EDUCATION SECTION, EXPENDITURES FOR VOCATIONAL EDUCATION, 1955-56 THROUGH 1965-66

Fiscal year	Total	Source of funds		
		Federal	State	Local
1965-66	$61,067,992.32	$16,598,470.17	$813,647.00	$43,655,875.15
1964-65	53,873,863.04	11,232,538.11	796,110.93	41,845,214.00
1963-64	24,998,187.11	3,244,476.00	762,100.35	20,991,610.76
1962-63	23,056,065.18	3,818,465.20	762,116.91	18,475,483.07
1961-62	20,706,944.32	3,460,878.72	681,283.00	16,564,782.60
1960-61	18,585,755.75	2,935,580.48	664,150.44	14,986,024.83
1959-60	17,093,941.81	2,598,372.41	651,827.00	13,843,742.40
1958-59	13,845,630.40	1,802,261.24	599,883.00	11,443,486.16
1957-58	12,792,682.31	1,809,634.72	619,507.00	10,363,131.59
1956-57	11,545,595.26	1,798,405.66	613,802.00	9,133,387.60
1955-56	11,293,399.95	1,620,489.24	723,757.53	8,949,153.18

Mr. HAWKINS. Thank you very much, Mr. Smith.

The next witness is Mr. Lee Ralston, director of vocational education, Los Angeles County Schools.

Pleased to have you, Mr. Ralston, before the subcommittee this morning.

STATEMENT OF LEE RALSTON, DIRECTOR, VOCATIONAL EDUCATION, LOS ANGELES COUNTY SCHOOLS, LOS ANGELES, CALIF.

Mr. RALSTON. Thank you, sir, and Congresswoman Mink. Congressman Hawkins, it is a pleasure to be here.

Mr. HAWKINS. Do you have a prepared statement?

Mr. RALSTON. Yes.

Mr. HAWKINS. Without objection, we will have that inserted into the record, and you may read it or summarize it as you see fit.

(Prepared statement by Mr. Ralston follows:)

STATEMENT BY LEE W. RALSTON, DIRECTOR, PRACTICAL ARTS EDUCATION, LOS ANGELES COUNTY SUPERINTENDENT OF SCHOOLS OFFICE

My name is Lee W. Ralston. I am the Director of Practical Arts Education for the Los Angeles County Superintendent of Schools Office. It has been my privilege to serve in this capacity for over 20 years.

At the present time I am also the Vice President for Trade and Industrial Education of the American Vocational Association. This national organization has a membership of 40,000 vocational educators.

A great deal has been said and done since the Vocational Education Act (PL 88-210) was passed in late 1963, with respect to training our youth and adults.

The Manpower Development Training Act has done much to reduce the unemployment rolls. Concurrently other agencies have been established that are also involved in manpower training.

At the local level we are concerned about the overlapping and duplication of effort.

With adequate funds provided for vocational education and a well coordinated method of funding, the vocational education program can absorb the increased load of additional students and expanded programs.

We are continually expanding the number of high school facilities and also the number of junior colleges. The adult education programs are being provided in a number of different kinds of organizational structures and facilities all under the supervision of the public schools.

Much of our emphasis has been placed on manpower training programs to meet the employment and unemployment demands confronting us today. Much of the program has been geared by necessity to remediation.

With additional funds for vocational education and a revamping of the high school program toward a more realistic approach to providing occupational and continuing educational programs the change can be made to one of prevention instead of correction.

With such a program our nations economy can be provided a stable and adaptable work force and the nation will derive the greatest return from our human resources.

We need to meet the challenge presented by dropouts and high school graduates that do not have employable skills that will continue to flood the labor market with increasing numbers of unemployables.

Our local budgets are being overtaxed to provide for our present program. Until some other method of providing funds is developed, it will be necessary that federal funds be increased for the next few years.

We would also urge that the Work Study Program be funded, to provide for youth enrolled in vocational education programs to stay in school and complete their training. This program has helped a large number of students to become productive units in our society instead of becoming unemployables or at the least underemployed.

As the high school occupational preparation programs and the junior college technical programs expand to meet both the needs of our increased population and the expanded needs of business and industry, there will be a demand for upgrading our administrators, directors, supervisors, coordinators, and instructors.

With the expanded program we will need to develop a larger number of instructors that are occupationally competent and professionally trained. We will need to use all kinds of devices, techniques, and procedures to recruit qualified personnel from business and industry. Our pre-service teacher education program will need to be stepped up both in quality and quantity. Primarily quality must not be sacrificed because of the pressure of immediate need and particularly in terms of quantity.

The technological advances are with us at every turn and one of our most difficult tasks is to keep our present teachers up to date with the new materials, equipment, and processes. In Los Angeles County we have been able to contribute in a small way by providing a series of workshops for graphic arts teachers during the summer last year. This spring we were able to conduct a workshop for approximately one hundred industrial education department chairmen from the high schools of Los Angeles County to promote and develop additional occupational preparation programs. Many more of these inservice programs are needed. To meet such needs it will require additional staff, facilities, and supplies. We have had wonderful cooperation from business and industry in providing this type of inservice education.

This spring in Southern California the requests for federal vocational education funds on a matching basis were in the proximity of $11,000,000. Based on prior experience we will probably have a little less than $8,000.000 to meet this need. This kind of information is indicative of the general pattern of funds that are needed to meet, operate, and expand the programs of occupational training.

I would like to take this opportunity to thank you for providing a channel to get this information about vocational education into the public record. I would also like to commend Congressman Hawkins for submitting H.R. 8382 that will amend the Vocational Education Act of 1963. These "Vocational Education Amendments of 1967" will provide much of the funds that are so desperately needed to meet the current and future needs of vocational education.

Thank you.

Mr. RALSTON. At the present time, in addition to being the director of practical arts education for the Los Angeles County Superintendent of Schools Office, I am also the vice president for trade and industrial education of the American Vocational Association, a national organization that has a membership of over 40,000 vocational educators. You mentioned that in your introductory speech. So, we are interested nationally as well.

Some of the things that Mr. Smith has indicated to you are in partial duplication in this. Some of them are different because we see our role in the county as a continuing or lengthening arm of the State department of education, but in a coordination basis within Los Angeles County.

One of the major problems that I see right now is the overlapping and duplication of effort from the several agencies. We have done a fine job with MDTA. Other agencies are being involved, as Mr. Smith has indicated, and we feel, with sufficient funds provided for vocational education and a well-coordinated method of funding, that vocational education programs can absorb the increased load of additional students and expand the programs.

The high schools and the junior colleges and the adult programs are being provided in a number of different kinds of organizational structures and facilities all under the supervision of public education.

Much of our emphasis has been placed on manpower training programs to meet the employment and unemployment demands confronting us today. Much of the program has been geared by necessity to remediation.

With additional funds for vocational education and a revamping of the high school program toward a more realistic approach to providing occupational and continuing educational programs the change can be made to one of prevention instead of correction.

With such a program our Nation's economy can be provided a stable and adaptable work force and the Nation will derive the greatest return from our human resources.

We need to meet the challenge presented by dropouts and high school graduates that do not have employable skills that will continue to flood the labor market with increasing numbers of unemployables.

Our local budgets are being overtaxed to provide for our present program. Until some other method of providing funds is developed, it will be necessary that Federal funds be increased for the next few years.

We would also urge that the work-study program be funded, to provide for youth enrolled in vocational education programs to stay in school and complete their training. This program has helped a large number of students to become productive units in our society instead of becoming unemployables or at the least underemployed.

As the high school occupational preparation programs and the junior college technical programs expand to meet both the needs of our increased population and the expanded needs of business and industry, there will be a demand for upgrading our administrators, directors, supervisors, coordinators, and instructors.

With the expanded program we will need to develop a larger number of instructors that are occupationally competent and professionally trained. We will need to use all kinds of devices, techniques, and procedures to recruit qualified personnel from business and industry. Our preservice teacher education program will need to be stepped up both in quality and quantity. Primarily quality must not be sacrificed because of the pressure of immediate need and particularly in terms of quantity.

The technological advances are with us at every turn and one of our most difficult tasks is to keep our present teachers up to date with the new materials, equipment, and processes. In Los Angeles County we have been able to contribute in a small way by providing a series of workshops for graphic arts teachers during the summer last year. This spring we were able to conduct a workship for approximately 100 industrial education department chairmen from the high schools of Los Angeles County to promote and develop additional occupational preparation programs.

I think Mr. Smith indicated, too, we are not complaining, but we are trying to identify the facts.

Many more of these inservice programs are needed. To meet such needs it will require additional staff, facilities, and supplies. We have had wonderful cooperation from business and industry in providing this type of inservice education.

This spring in southern California the requests for Federal vocational education funds on a matching basis were in the proximity of $11 million. Based on prior experience we will probably have a little less than $8 million to meet this need. This kind of information is indicative of the general pattern of funds that are needed to meet, operate, and expand the programs of occupational training.

I would like to take this opportunity to thank you for providing a channel to get this information about vocational education into the public record. I would also like to commend Congressman Hawkins for submitting H.R. 8382 that will amend the Vocational Education Act of 1963. These "Vocational Education Amendments of 1967" will provide much of the funds that are so desperately needed to meet the current and future needs of vocational education.

We would also urge the work-study program be funded to provide youth enrolled in vocational education programs to stay in school and complete their training to become productive units in our society or at least be employed as the high school preparation and junior technical college technical programs expand to increased population and expanded needs of business and industry.

I might indicate to you this was outside of Los Angeles City. Los Angeles City was taking care of its own.

Mr. HAWKINS. Thank you, Mr. Ralston.

Mrs. Mink.

Mrs. MINK. Thank you very much, Mr. Ralston.

I must take this opportunity, Mr. Chairman, to make a plug for my own bill on sabbatical leave for teachers.

Mr. HAWKINS. I will give you 30 minutes, if you will wait.

Mrs. MINK. I think that the bill here addresses itself to this need in the vocational area, and again I would like to ask you this one question on the provisions in the bill and whether you feel it might not be directed to the two specific areas of providing training in teaching techniques to the persons that have yet to be included into the system as contrasted to those already in the system whose education needs to be upgraded in their specific field of activity, and whether you think we might not make this kind of delineation in the bill, because I think the way in which the program needs to be devised is so vastly different.

One, you are attempting to set up a sort of a sabbatical program perhaps for the teacher in the institution and urging them to go back for more technical training or back to an institution for higher education; and the other the necessity of attracting those in private industry to come into the vocational institution to teach and meet the certification requirements of the State.

I wonder if I could have your comment on that.

Mr. RALSTON. It seems to me you have devised that kind of separation to be effective for the preservice training.

I call your attention to the fact there are many places where we do not get occupationally qualified people out of the university and, so, the preservice would include both of these.

As you indicated, probably it would help to have different designated amounts in the two segments. The inservice, I think, would need to have separated with no ceiling on it because it seems to me we have to use every kind of imagination we can to keep our people up to date.

Some of it may be sabbaticals. I would hope it would be also fellowships and scholarships and any other way we can come up to help support these people, because if we don't do this our program, as Mr. Smith has indicated, is only as strong as our people.

Mrs. MINK. Does California have a sabbatical program for your vocational teachers?

Mr. RALSTON. This depends on the local district. Each district has its own kind of program. Some of them do, and some do not.

I wouldn't be in a position to answer that accurately as to how many districts do or do not.

Mrs. MINK. Thank you very much, Mr. Chairman.

Mr. HAWKINS. Thank you, Mrs. Mink.

Mr. Ralston, I suppose in the county you have both the Neighborhood Youth Corps as well as the work-study program under the Vocational Education Act.

There has been a suggestion that these programs overlap or duplicate and perhaps one could be discontinued.

Do you see a distinction in the two approaches, or do you agree or disagree we need both or that one should be discontinued?

Mr. RALSTON. Well, frankly, I am not too aware of the National Youth Corps program, but it seems to me the work-study program has done a fine job, and some of the people from the local districts will be giving you specific testimony on that. And I would rather defer to their testimony rather than make a comment on it directly.

Mr. HAWKINS. On page 4 you mention the request for Federal vocational education funds in the proximity of $11 million and then——

Mr. RALSTON. That was for this spring.

Mr. HAWKINS. That was for this spring?

Mr. RALSTON. Right.

Mr. HAWKINS. Was that the total need, or was that merely the request based on what could be matched?

Mr. RALSTON. These are the requests that could be matched.

Mr. HAWKINS. You say the need is greater than that?

Mr. RALSTON. Yes. It would be greater than this.

These are the Federal funds that are being requested.

Mr. HAWKINS. Would you give your guess on just how much of the need is actually being met?

Mr. RALSTON. I would guess 50 percent. That is a roundhouse guess.

Mr. HAWKINS. All right, Mr. Ralston.

Thank you very much.

The next witness is Dr. Margaret Crawford, assistant dean, Los Angeles Trade Technical College.

Mrs. Crawford, it is a pleasure to have you with the committee this morning, and through you I suppose we should convey our deep appreciation to Los Angeles Trade-Technical College for having made these facilities available to us and having cooperated with the committee.

I personally want to express my own personal appreciation for all the cooperation I have received over the years from the Los Angeles Trade-Tech. I am pleased to have it located in my district and to represent the area, and I hope you will assure Dr. Wilbur of a very profound thanks.

You have a statement which will be entered into the record as presented, and you may summarize or present the statement as you see fit.

STATEMENT OF DR. MARGARET CRAWFORD, ASSISTANT DEAN, COUNSELING AND GUIDANCE, LOS ANGELES TRADE TECHNICAL COLLEGE, LOS ANGELES, CALIF.

Dr. CRAWFORD. Thank you very much, Congressman Hawkins, and Mrs. Mink.

(The prepared statement of Dr. Crawford follows:)

STATEMENT BY DR. MARGARET L. CRAWFORD, ASSISTANT DEAN, COUNSELING AND GUIDANCE, LOS ANGELES TRADE-TECHNICAL COLLEGE

Los Angeles Trade-Technical College serves 15,000 students, of which approximately 4,500 are full-time day students. They are enrolled in some sixty different trade and technical majors, in business education and in general studies.

A counseling staff of twelve full-time counselors serves these students. Additional evening assignments are used. All of the counselors are former vocational teachers who are prepared to work in guidance. Each department of the college has a counselor assigned for its students. Counselors pre-program continuing students in the classes and establish rapport by individual service. The same counselors, working with the individual departments, test and interview these students at time of entrance. Students, then, have the same counselor for four semesters.

We attempt to place a counselor with experience in the same trade-technical or business field as the department to which he is assigned. We see a need for upgrading vocational teachers as counselors for vocational education. We feel that such persons make superior counselors and are better able to guide the students toward realistic goals.

Two years ago we started a program to assist the educationally disadvantaged to enter occupational training. The results have been so successful that this plan is presented for your consideration, as a way of realistically meeting the needs of these young people. Reports on this program and on our methods of selection for the regular program are attached.

Planning for Students in the Lower Quartile—Los Angeles Trade-Technical College

(By F. Parker Wilber, President, and Margaret Crawford, Ed. D., Assistant Dean, Counseling and Guidance, February 1967)

The great numbers of students in the lower quartile knocking at the gates of the junior colleges are a major concern. We have the opportunity to assist them in becoming productive citizens of the community and a strength to the economy and the nation. Our responsibility in California is not only a moral one, it is a legal one; for California law requires that the junior colleges accept all high school graduates and authorizes admittance of those 18 years of age or over "who can profit from the instruction".

The most commonly used means of identification of these low-achieving students has been a score on a scholastic aptitude test; that is, a vocabulary-reading comprehension and arithmetic computation score. Singly, the scores are used for English and Math placement levels, or a composite score is used to place the student in remedial programs for those with low aptitude for college academic courses. Experience with academic remedial programs has not provided a very hopeful picture that such remedial programs enable these students to eventually do college level work. In fact, a recent study by Ellida Topik of East Los Angeles College pointed out the fact that many of these students were unable to meet college standards after remedial instruction—or at best, they were able to 'hang on' in some cases for a second semester. This group comprises about one-third of the students applying for academic and business training at Los Angeles Trade-Technical College—a figure comparable to many urban colleges.

The highly unrealistic level of aspiration of these students as opposed to their actual academic achievement level leads to tension, anxiety, frustration and drop-out—it is probable that the difficulties we find in obtaining financial support for schools can be attributable to some of the "revolving door" experiences they have encountered with us. These disappointments, compounded with inability to meet rising economic costs, can easily spark a "no" vote at a tax override or school bond election.

An innovative approach to the problem through introduction of a vocational education concept seems to hold promise. The concept assumes that the vocational goal of the student may be part of his personal motivation for educational achievement. A program for low aptitude applicants has been in operation at Los Angeles Trade-Technical College for the last two years. In the fall of 1964, seeking a means of conducting realistic occupational training for low achievers, Trade-Technical College departments were requested to improvise experimental vocational curricula in order to offer occupational skill development courses geared to the low abilities of these students. Starting with the Art and Nursing fields, basic skills training in Art Production Assistant and Home Nursing Assistant courses was set up. It was planned that students making satisfactory progress in these programs would enter the regular vocational curricula at the end of one semester. Students unable to qualify for regular programs at the end of training would be placed on low-level jobs in the community.

In the Art field, the curriculum consisted of the basic techniques of lettering, drawing, paste-up and perspective. Those unable to go on in Commercial Art but showing some skill were encouraged to continue in Sign Painting, Merchandise Display or Advertising Production. In the Nursing area, those unable to enter the regular program to obtain a State license for Licensed Vocational Nursing were placed in nursing homes as Nursing Home Assistants or in hospitals as hospital aides. Vocabulary building and fundamental arithmetic courses were required for remedial instruction.

These two programs started in February 1965. Their success led to other departments offering such opportunities. We now have such programs, called "Assistant Programs" in Art, Aircraft, Apparel, Building trades, Drafting, Electrical trades, Electronics and Nursing. Future planning includes two such programs for Automotive Servicing and one for Cosmetology Salon Assistant.

The selection of students for these programs grew out of our experience with entering certain borderline ability students on probation in the regular classes.

The guidance of trade-technical applicants into the regular program is based on the rationale that people have many different kinds of intelligences. Among these intelligences are academic, clerical, mechanical, musical, artistic and social intelligences. Mechanical intelligence is important in many technical fields. Research shows it to be composed of such factors as reasoning, spatial visualization, dexterity, verbal understanding and number. Such factors are identifiable by the use of standardized aptitude tests. Working with the departments concerned, a job analysis is done on the occupation by the guidance research counselor. From these data a large number of aptitude test factors are used to test incoming freshmen. At the end of training, instructor ratings of performance are correlated with these test scores. Predictive tests are examined for the amount of inter-correlation occurring between test factors. Those tests showing the highest relationship to instructors' ratings and the least relationship to each other are developed into a battery to predict successful training. The factors are weighted statistically and a table of weighted standard scores is developed for each possible raw score on the tests used in the battery, using a mean of 20 and a standard deviation of 10. The standard scores made by the experimental group are totaled into a battery scores and percentiles developed from these total battery scores. The cutting point for entry into the regular classes is usually the 33rd percentile.

After testing, applicants review their scores during an interview with a counselor and an instructor. The instructor may accept an applicant below the cutting point on probation if he feels that there are some mitigating circumstances. It was the success of some of these probationary students that led to the thought that some of these people could be better served, and the plan to develop the assistant programs for those scoring below the cut-off was developed. Again, experience showed that applicants making scores below five standard scores on the total battery were unable to master skills and so a floor was placed at that level for accepting low achievers into the assistant classes.

Assistant classes are often small (10 to 25 students). The instructors are carefully selected and have "guidance" attitudes as well as subject competence. They work closely with the Guidance Counselor, who explains individual strengths and weaknesses of each student to the instructor. The instructors are encouraged to use innovations in teaching—audio-visual aids—any techniques that will aid these people to learn. One counselor is assigned to each of these classes to follow through on student progress. At the end of the semester, the counselor re-tests the class on the aptitude test battery as a measure of growth. Students showing sufficient improvement meet entrance standards for the regular programs and are entered into the beginning regular program in clear status. Experience has shown that about one-third of these students will improve sufficiently to enter the regular program. Another third will be recommended by the instructor to enter the regular program on continuing probation, and about one-third will be referred for low level job placement to the Employment Office, or to another area of training or Adult Education classes for more remedial work.

A check on the last semester's assistants' classes showed an increased number of persons going into the regular programs. A further check on the progress of those going on into the regular program revealed about fifty percent were doing satisfactory work. The program is more successful in some curricular areas than others and there are more job opportunities available in some areas than others. The overall evaluation of these programs indicates that they are successful in enabling a sizeable percentage of students in the lower quartile to develop sufficient skills to enter the regular occupational programs, and for some others, to obtain employment. There is less drop-out in these classes than in any other academic or vocational classes in the college. The student motivation is generally high.

Attached are some of the curricula developed for these programs and a detailed report of the Spring 1966 classes with a follow-up report, Fall 1966.

These courses are in no way a dilution of the regular trade-technical program. Standards of entrance remains the same for those curricula. However, we are able to offer further educational opportunity to the lower quartile people by means of these assistant programs.

On the basis of two years of experience in conducting experimental one-semester occupational courses (for low-ability students) we believe that integrating a student's vocational goal into a probationary skill program is a motivating factor in both attendance and purposeful learning of occupational skills; further, these probationary vocational programs contribute to the student's self-inventory of abilities and adjustment to more realistic goals.

AUTOMOTIVE SERVICING

Requirements for the Certificate of Completion will be met by completing courses 1 through 6, listed below, and English 21.

Catalog

1. Basis and Applied Mathematics (2 units). Instruction is given in Basic Arithmetic, measuring, and in mathematical processes involved in automotive service work.

2. Automotive Servicing Principles (2 units). A study is made of the Automotive industry procedures including Automotive nomenclature, parts, and their functions.

3. Automotive Manual Interpretation (2 units). The student is given instruction in reading and interpreting Automotive service manuals, lubrication charts, procedure bulletins and text books.

4. Basic Automotive Tools and Equipment (1 unit). Students learn the names and proper tools and equipment used in the Automotive shop. Safety in tool operation is stressed.

5. Automotive Bench Work Operations (1 unit). Instruction is given in drilling, tapping, sawing, filing, soldering and light welding.

6. Automotive Servicing (4 units). The student is given experience in lubrication, servicing U Joints, packing front wheel bearings, changing oil and filters, replacing mufflers and tail pipes, replacing spark plus, points, condensers, carburetors, generators, starters, etc., using the oxy-acetylene torch to remove various body parts, upholstering cleaning and repair, steam cleaning engine and chassis.

ASSISTANT COOK CURRICULUM

Requirements for the Certificate of Completion may be met by completing courses 1 through 8, listed below, and English 21.

Catalog

1. Prefabricating Vegetables and Salad Greens (1 unit). Course covers instruction in the storing, cleaning and cutting of vegetables as required by the daily menu. Simple preparation of vegetables by steaming and boiling is included.

2. Basic Cookery Practices (2 units). Instruction includes assisting in the preparation of soups and stocks and aiding the chef in the processing of roasts, stews, sauces and casserole dishes.

3. Short Order Cooking (2 units). Course covers training in the use of the griddle and deep-fat fryer; preparation of meats, fish, vegetables, eggs, and various batters.

4. Pantry Practices (1 unit). Course offers instruction in line-up and dish-up work of the foods used in pantry service, such as salads, sandwiches, and cold plates.

5. Baking Practices (1 unit). Course offers instruction in the basic baking practices used in preparing hot breads, rolls, pies, cakes and puddings.

6. Safety, Sanitation, and Ethics of the Trade (1 unit). Instruction is given in the proper and safe use, care, and maintenance of kitchen tools and equipmet; personal hygiene and sanitary handling of foods in today's restaurant operation are studied, and basic employment information and professional ethics are reviewed.

7. Applied Mathematics for Assistant Cooks (2 units). Course offers a review of basic arithmetic; the use of weights and measures in the commercial kitchen and techniques of increasing or decreasing cooking formulas are studied.

8. Basic Theory of Food Preparation and Kitchen Organization (1 unit). Instruction is offered in identification of vegetables, fruits, seafoods, poultry and meats; convenience foods and their use in the modern kitchen are emphasized, and the basic scientific principles involved in the preparation of food for mass consumption are studied.

AIRCRAFT PRODUCTION SKILLS CURRICULUM

Requirements for the Certificate of Completion will be met by completing courses 1 through 8, listed below.

Catalog

1. Applied Mathematics for Aircraft Production Skills (1 unit). The mathematics needed for Aircraft Production skills is offered in this course.

2. Aircraft Basic Tools Procedures (2 units). The use, care, and maintenance of basic tools is offered in this course. Emphasis is placed on the development of proper work habits and skills.

3. Aircraft Production and Measuring Tools (1 unit). The care, use, adjustment and maintenance of production assembly tools and measuring tools are offered in this course.

4. Aircraft Production Methods and Materials (1 unit). Practical applications of production skills are practiced in this course, utilizing the materials of aircraft construction.

5. Aircraft Sub Assembly Blueprint Reading (1 unit). Blueprint reading is offered as related to aircraft sub assembly work.

6. Aircraft Riveting and Sub Assembly (3 units). Instruction is offered in aircraft sub assembly and riveting procedures. Emphasis is on the development of production riveting skills.

7. Coding and Nomenclature of Aircraft Fasteners and Hardware (2 units). This course offers basic information in the coding and nomenclature of aircraft fasteners and hardware.

8. Aircraft Fasteners and Hardware Assembly (1 unit). This course offers instruction in the installation of a variety of fasteners and hardware used in aircraft production.

ART PRODUCTION ASSISTANT CURRICULUM

Requirements for the Certificate of Completion will be met by completing courses 1 through 8, listed below, and English 21.

Catalog

1. Basic Drawing Methods (1 unit). This is a study of organized drawing. Projects dealing with image size, proportions, alignment, and basic shape are emphasized.

2. Perspective Drawing Principles (3 units). Students study the theory of perspective and its practical application to a wide variety of problems.

3. Art Rendering Techniques (1 unit). This course offers training in line-art, continuous tone, and color rendering techniques.

4. Technical Art Methods (1 unit). This is a study of graphic projection, and how to apply these factors to the illustration used for technical purposes.

5. Life Drawing Methods (1 unit). This is a study of the human form, with emphasis on basic drawing methods.

6. Hand Lettering Techniques (1 unit). Instruction is given in the fundamentals of letter forms, spacing and copy layout.

7. Production Art Methods (1 unit). This is a study of the mechanical skills required in processing art for reproduction purposes.

8.* Principles of Advertising Design (2 units). This is a study of composition and its application to page layout and illustration.

BASIC AIR CONDITIONING TECHNIQUES

Catalog

57. Heating and Ventilating Practice (1 unit). This course introduces the student to laboratory work and provides experience in measuring air flow combustion and furnace performance characteristics.

58. Heating and Ventilating Systems (1 unit). This course is an introduction to heating ventilating systems and equipment with emphasis on basic calculations.

59.* Basic Refrigeration (1 unit). Instruction is offered in the basic mechanical compression cycle of refrigeration. Practical applications are noted.

60. Piping Practices (1 unit). Shop instruction is given in the manipulative skills of flaring, swaging, soldering, welding and pipe threading and cutting.

61. Tools and Materials (1 unit). This course deals with the tools used in current air conditioning, refrigeration and sheet metal shop practice with reference to the materials used.

62. Applied Basic Drafting (1 unit). The basic principles and practices in drafting, lettering, geometrical constructions, views and projections are studied with reference to air conditioning refrigeration and sheet metal practice.

BUILDING CONSTRUCTION TECHNIQUES

Requirements for the Certificate of Completion will be met by completing courses 1 through 6, listed below, and English 21.

Catalog

1.* Building Construction Employment Information (1 unit). This course offers a brief history of the building industry including present-day conditions and practices. Employment information, job orientation, safety, and the role of the various tradesmen in this field are studied.

2.* Building Construction Mathematics (3 units). Students are given instruction in the use of addition, subtraction, multiplication, division, denominational numbers, fractions, mensuration and plane geometry pertaining to the building trades.

3. Materials of the Building Industry (1 unit). Instruction covers the basic materials which are common to the construction trades; their use, composition, selection, identification, and availability are studied.

4.* Principles of Hand and Machine Tools (1 unit). This course includes a study of terminology, description, purposes, uses and the functional principles of basic hand and machine tools; included is a study of their limits, the proper care and safe and correct use of each tool and machine. Stress is placed upon the selection of a proper tool or machine for a particular use.

5. Blueprints and Drawing (1 unit). Training is given in the interpretation of specifications and blueprints, development of hand sketches, and isometric and orthographic drawings. The student progresses through these units into scale working drawings, using given, standard, and derived measurements as applied to building construction.

6. Hand and Machine Tool Applications (3 units). This course is designed to develop skills in specific bench work operations. Laboratory work consists of proper use of basic hand tools, machines, power actuated tools, and welding equipment common to the building industry.

COSMETOLOGY SALON ASSISTANT CURRICULUM

Requirements for the Certificate of Completion will be met by completing courses 1 through 3, listed below, together with English 21 and Mathematics 30.

Catalog

1. Salon Assistant Techniques (2 units). This course offers instruction in the personal services offered by salons, including the techniques of maintaining professional cosmetology salon conditions.

2.* Salon Patron Relations Techniques (2 units). This course presents the essentials necessary to develop pleasant relationships between patrons and personnel. Professional etiquette and courtesy, community and personal hygiene, proper and judicious use of the telephone, and salesmanship techniques are studied.

3. Cosmetology Tools and Equipment Applications (2 units). This course includes the method of selecting and ordering materials and supplies, and the practice of safety measures in relation to equipment and supplies, and the care of equipment.

CLOTHING MANUFACTURERS ASSISTANT CURRICULUM

Requirements for the Certificate of Completion may be met by completing courses 1 through 6, listed below.

Catalog

1.* Fashion Design Theory (2 units). The course includes a study of occupational information, principles of fabric and design, principles of design and color, and fashion history.

2.* Mathematics for Fashion Design (3 units). Instruction is given in basic arithmetic, measuring, and in mathematical processes involved in fashion design.

3. Basic Sewing Techniques (2 units). This course develops the ability to understand needle skills and basic construction procedures for making tailored and dressmaker type garments.

4. Pattern Making and Design (2 units). The student is instructed in the technical methods or procedures for making a flat pattern with emphasis on the use of basic blocks and problems to develop the student's creative ability.

5. Draping and Design (2 units). This course introduces the student to the fundamentals of draping. The student is given instruction on selected types of garments and the basic theory of design as applied to draping.

6. Fashion Art and Design (1 unit). A basic course offering training in fashion figure drawing, fabric rendering, and the study of color techniques.

DRAFTING OFFICE ASSISTANT CURRICULUM

Requirements for the Certificate of Completion will be met by completing courses 1 through 3, listed below, and English 21.

Catalog

1. Drafting Fundamentals (3 units). This course offers basic drafting instruction in the types, quality, care, and use of drafting equipment and materials. Practical training is given in fundamental skills of line work, lettering, instrumental drawing, and drawing projections relating both to Mechanical and Architectural Drafting.

2.* Basic Mathematics of Drafting (3 units). Instruction and review of basic mathematics is offered covering addition, subtraction, multiplication, and division of common and decimal fractions; the use of conversion and decimal equivalent tables and applications to practical problems.

3. Drafting Room Procedures (3 units). This course acquaints the student with standard drafting room procedures. The course includes instruction and practice in various phases of drawing reproduction, drafting room manuals and standards, filing systems, and the opertion of office copying machines.

ELECTRICAL SUPPLIES AND EQUIPMENT PROCESSING CURRICULUM

Requirements for the Certificate of Completion may be met by completing courses 1 through 3, listed below, and English 21.

Catalog

1. Applied Mathematics for Electrical Trades (2 units). Instruction is given in basic arithmetic, measuring, and in mathematical processes involved in material takeoff, ordering, and distribution in relation to the most efficient use of materials and devices used in the electrical industry.

2.* Job Techniques for the Electrical Industry (3 units). This course is a study of the kinds of skills required in the various occupations related to the electrical industry.

3. Basic Electric Shop Practice (4 units). This is a course in applied job procedures using the mechanics required in the various electrical trades.

ELECTRONICS ASSISTANT CURRICULUM

Requirements for the Certificate of Completion will be met by completing courses 1 through 3, listed below, and English 21.

Catalog

1. Basic Electronics Laboratory (3 units). This course includes basic laboratory experience in electronics work. Practical training is given in shop safety, use of basic tools and equipment, printed circuit techniques, metal working, and interpretation of schematic diagrams. Calculation and construction of basic circuits is included in the course.

2.* Applied Electronics Mathematics (3 units). Instruction and review of basic mathematics is offered. Operations with common and decimal fractions are reviewed. The course includes instruction and problem solving with negative numbers, simple equalities, and fundamental electronics problems.

3. Electronics Testing Procedures (3 units). This course includes instruction in theory and use of fundamental electronics test equipment. Safety procedures, applications, and typical test situations are explored. Current, voltage, resistance, and other test procedures are discussed and practiced.

MECHANICAL ASSISTANT CURRICULUM

Requirements for the Certificate of Completion will be met by completing courses 1 through 5, listed below, and English 21.

Catalog

1. Mechanical Bench Work (3 units). Course covers use and care of basic hand and power tools. Simple layout work and machine exercises are included.

2. Machine Shop Blueprint Reading (1 unit). Instruction is offered in the development and use of mechanical blueprints.

3. Use and Care of Measuring Tools (1 unit). This course covers common measuring devices. Projects provide the opportunity for developing skills in their use.

4.* Manufacturing Methods and Materials (1 unit). Instruction covers the common materials used in manufacturing processes and relates kinds of materials to production requirements.

5.* Applied Mathematics for Mechanical Assistants (3 units). Instruction is given in basic arithmetic, measuring, and in mathematical processes involved in mechanical work.

PRINTING—JOB SHOP ASSISTANT CURRICULUM

Requirements for the Certificate of Completion will be met by completing courses 1 through 5, listed below, and English 21.

Catalog

1. Job Shop Composition (2 units). This course includes the setting of routine forms and instruction in distribution, pulling proofs, corrections, elements in proofreading, point system, and type recognition.

2.* Job Shop Composition Theory (1 unit). Students are taught the principles of various composing room machines; safety precautions, and how to select and order parts, materials and supplies.

3. Job Shop Presswork Operations (3 units). The students receives training in caring for press machines and ink rollers, putting form on press; feeding blank stock; interpretation of job tickets, time tickets, and commercial forms; locking up type forms, feeding live jobs; classifying paper and ink; and testing ink qualities.

4.* Presswork Theory (1 unit). Principles of Underlaying, Interlaying and Overlaying operations are taught. They constitute the makeready of the form in relation to obtaining the correct amount of impression to properly transfer ink to paper.

5.* Job Shop Applied Mathematics (3 units). A basic course in arithmetic for printers is presented, including fundamental operations, fractions, decimals, percentage, ratio and proportion and the printers' point system and equivalents. Methods of estimating type, paper, time, cost, and copyfitting are also presented.

NURSING HOME ASSISTANT CURRICULUM

This curriculum prepares the student to function in a nursing home under the direct supervision of a registered nurse or a licensed vocational nurse.

Requirements for the Certificate of Completion will be met by completing courses 1 through 3, listed below, together with English 21 and Mathematics 30.

Catalog

1.* Scope of Nursing (2 units). This course is an introduction to the scope of nursing, the role and contribution of various practitioners of nursing, who function to meet the needs of all kinds of patients. Important personal qualities needed by nurses are explored, as well as the emotional responses of patients to illness.

2.* Care of the Geriatrics Patient (3 units). This course assists the student to develop a philosophy toward the aging person. Instruction includes an understanding of their physical, mental, and social needs and the resulting implications for providing necessary care. Instruction is also given in diversional therapy appropriate to the individual patient.

3. Nursing Procedures (1 unit). This course prepares students to function in the nursing home, and in the home environment, to perform simple nursing tasks for the patient with limited nursing needs. Demonstration and practice are given in the laboratory.

A few short-term programs without academic work are being developed for certain low ability jobs. At present these are one-unit courses in Apparel Spotting or Pressing. It is planned to extend these opportunities if the need arises. No testing is used for this entry and the class leads only to direct employment and not to entry into the regular program.

Aptitude tests for business fields have been developed also at the college. They are given in conjunction with a scholastic achievement test. The scholastic achievement test is used in counseling to place the low level business student who is a high school graduate in a College Basic Skills curriculum taught by team teaching. Older students are programmed into similar remedial courses. The aptitude test batteries for filing, typing and office machines are used to encourage these people to take some electives in these areas if aptitude is shown by testing. It has been our experience that an applicant may possess the dexterity and perceptual speed to be a good typist, but may not have the vocabulary or space skills required for shorthand. It appears to be encouraging to these people to find that they have special abilities which can lead to training for occupational skills rather than be faced with the feeling of failure attached to placement in some of the remedial programs. Our studies showed that the Scat Quantitative section appeared to be the best overall predictor for success in business curricula. The Employee Aptitude Survey, Task 4, Visual Speed and Accuracy (an IBM machine-scored version of the number comparison section of the Minnesota Clerical Test) showed excellent results for checking accuracy and ability to see details—factors long associated with successful clerical work.

We find some administrative and admissions problems evolving from these programs. If the instructional departments refer too many of these students to such classes on probation and then about one-third or more qualify for later admissions, they may block the admissions of more able students and these become lost to the college program. There needs to be agreement as to the total numbers that can be served on a probationary basis and that will not interrupt our commitment to the able high school graduate who qualifies for enrollment.

We may ask ourselves about the expense of these programs. Can we afford them? On the other hand, can we afford *not* to try?

PROGRAMS FOR THE EDUCATIONALLY DISADVANTAGED—RESULTS OF TEST-RETEST AND COUNSELING IN THE ASSISTANT PROGRAM, NOVEMBER 1966

A program to assist the educationally disadvantaged through pre-training for occupational fields was begun at Los Angeles Trade-Technical College in February 1965. The program was broadened during the following year. A study made in December 1965 revealed that about one-third of the students from these classes could improve their skills so that they could meet aptitude test scores set at minimum entry standards for the regular programs; about one-third were accepted into the regular programs on probation; and about one-third were unable to make sufficient progress and were assisted by individual counseling toward other goals.

This report is an extension of the former study, and deals with the progress made by students enrolled in these classes during the Spring semester 1966. The results indicate that these courses are helpful to students and that a growing percentage of educationally disadvantaged students are able to enter the regular curricula through this avenue of preparation.

Among the salient features of the program are the following:

(1) Close cooperation exists between the instructors and the Guidance counselors. Instructors are alerted to student strengths and weaknesses through test interpretation; (2) Instruction is individualized and matched to the students' progress; (3) Retesting is done to assess growth; (4) Individual counseling is carried out by the Guidance counselor assigned to the individual department; (5) The instructor and counselor work together to guide the student toward realization of realistic occupational goals.

Aircraft production skills

Nine students failing to qualify for Aircraft Mechanics curriculum by test score were enrolled in Aircraft Production Skills curriculum in February 1966. instructor Mr. Pumphrey. They were retested during the first week of May, 1966 and counseled by Mrs. Jean Gleis, with the following results:

Counselor and instructor recommendations	N	Percent	Aptitude test retesting, average battery score	Average gain (standard scores)
Recommended for aircraft mechanics in regular status	2	22	96	5
Recommended for aircraft mechanics on probation	4	45	92	3
Not recommended to continue	3	33	87	7
Total	9	100		

Correlation between the original aptitude test battery scores and instructor ranking in class achievement for Aircraft Production Skills was p. 91, significant at the 1% level. Over 80% of the instructor's grade was predictable by test score on this limited sample of nine students.

Discussion.—There appears to be considerable difference in the gains on retest scores between those recommended for regular status, for probation and those not recommended in the areas of perception of detail, visualization and vocabulary. While the latter group improved in knowledge of tools, in math and in facility with numbers, the lack of growth in the other areas appeared in part to mitigate against successful training. Each of the students was offered counsel by Mrs. Gleis. Counselor's report: One student has a history of freezing on math tests, which explained his trouble with the retest on number. One student (older) has English as his second language. He was counseled toward additional reading skills, but is working fulltime—will take reading courses if he can schedule them within the six-hour day. One student has a history of remedial instruction in reading. His comprehension is better than his vocabulary (plausible in that his reasoning is high.)

One student is working up to 16 hours a day at times, and 8 hours regularly. He has financial responsibilities which preclude his taking the course and keeping his health. Student was referred to health office and counseled that he could not work such hours and remain in school.

Building trades

Building Construction Techniques curriculum was established in the Fall of 1965. Thirteen students whose scores on the aptitude test battery were below the cut-off score for regular status were enrolled in the course in February, 1966, on probation. The class was retested in June with the same aptitude test battery, correlation between original test scores and teacher ratings of performance at the end of the semester was calculated, recommendations of the instructor, Mr. Burgess, were obtained and the students were counseled by Mr. Gilreath, counselor assigned to the Building Trades Department. The following results were obtained:

Counselor and instructor recommendations	N	Percent	Aptitude test results of retesting average retest, total battery score	Average gain (standard score points)	Areas of greatest gain
Enter regular program with clear status.	3	23	77	4	Vocabulary.
Enter regular program on probation	7	54	75	3	Math, space and perception.
Total counseled in regular program.	10	77	---------------	-----------	
Total not recommended to continue in regular program.	3	23	73	2	Space only. No gain in vocabulary or math.

Entered armed services, 1; counseled to adult school for basic education, 1; and counseled to adult school but petitioning to re-enter Building Construction Techniques class, 1.

Discussion.—Correlation between original testing on total battery score and class rank was p = .73. This correlation was significant at the 1% level.

The figure of 77% recommended to continue is a gain over the general figure of 66% for such classes formed in the Fall of 1965. The figure of 23% recommended for regular status is slightly below the 33⅓% overall figure formed in the Fall 1965 semester. Minority race students are progressing well.

Recommendations.—The course appears to be helpful to students. No change in the policy is indicated. A math score on the Skills section of the Cooperative Mathematics Test for Grades 7, 8 and 9 below 11 (12th percentile for Grade 9) is contra indicative of success in the regular program.

Clothing manufacturer's assistant

Thirteen students whose aptitude test scores for Fashion Design were below the cutting score were enrolled in Clothing Manufacturer's Assistant curriculum in February, 1966—Mrs. Riddle, instructor.

These students were retested during the first two weeks of May. Nine of the students had improved their scores and were programmed into the Fashion Design course in regular status for the next semester. Four of the students were accepted on probation. All of these students improved their total scores on the retest and all of the students received individual counseling from Mrs. Verna DeLong, counselor assigned to the Apparel Department. The following results were obtained:

Counselor and instructor recommendations		Percent	Aptitude tests, results of retesting	
			Average retest (total battery score)	Average gaining in standard score points (total battery score)
Recommended for regular status	9	70	169 H	8
Recommended for probation	4	30	156 L	6
Total recommended for fashion design	13	100	---------------	---------------

Discussion.—The curriculum appears to be successful in preparing students for Fashion Design. On the retest, the scores on the Farnsworth Color Test and the Form Board appeared to differentiate between progress made by the two groups. A Farnsworth error score of 37 and an age above 33 appeared to be critical for progress for this group.

Drafting

Seven architectural drafting and nine mechanical drafting students whose aptitude test scores were below the cutting scores were enrolled in Drafting Room Assistant curriculum in February 1966—Mr. William Laird, Instructor.

These students were retested May 6, 1966 with the following results:

Counselor and instructor recommendations	N	Percent	Aptitude test results of retesting total score, average retest	Average gain in standard score points	Area of greatest gain
Architectural: Recommended for regular status.	7	100	122 M	11	Design judgment 22 points. Space, math skills, and vocabulary.
Mechanical:					
Recommended for regular status.	5	55	79 M	10	Math skills, 15 points.
Recommended to continue on probationary status.	4	45	74 L	5	Visualization but no increase in verbal or math scores.
Total recommended into regular courses.	16	100	---------------	--------	

Discussion.—The greatest gain in scores of the Architectural Drafting students was in Design Judgment. The greatest differences between the probationary students and those recommended for regular status in Mechanical Drafting were in perception of detail, 13 points, and in Math Skills, 15 points, Vocabulary 4 points, and Reasoning 4 points. Some additional work in Speech and Vocabulary seems indicated. The course was responsible for 100% of the students being admitted to the regular Drafting curriculum. Correlation: Architectural Drafting p. 36; Mechanical Drafting p. 46.

Electrical supplies and equipment processing

Sixteen students applying for Electrical Construction and Maintenance failed to qualify by cutting scores on the aptitude test battery and were enrolled in Electrical Supplies and Equipment Processing in February 1966—instructor, Mr. Brush. These students were retested and counseled by Mrs. Lois Milby, counselor for the Electrical Department, during the first week of May, 1966, with the following results:

Counselor and instructor recommendation	N	Percent	Aptitude test results of retesting average retest (total battery score)	Average gain (standard scores)
Recommended for enrollment in regular program:				
Clear status	5	31	81 M	5
Probationary status	6	38		
Total	11	69	76 L	4
Not recommended:				
Referred to adult school for remedial work—to retest the following semester	4	25	72 L	3
Went to armed services	1	6		
Total students in class	16	--------	---------------	----------

Discussion.—There appear to be some differences in the retest scores differentiating between those recommended to continue and those not so recommended. These scores are on tests of perception of detail, knowledge of tools, vocabulary and solving of arithmetic problems. The total of 69% recommended to continue into the regular program is consistent with the figure of 66% generally recommended to continue into the regular program during the previous semester. Of this group 31% were recommended to continue in clear status. This is consistent with the 33⅓% figure so recommended in the previous semester. It appears that the course is useful in preparing those students who are unable to enter the curriculum without remedial training for entry into the Electrical Construction and Maintenance curriculum. Two students unable to enter the regular program were placed in industry in low-level jobs.

Electronic assistant

Fourteen students scoring below the aptitude cut-off score for Electronic Technician were enrolled in the Electronic Assistant curriculum in February 1966. These students were retested and counseled by Mrs. Milby, counselor for the Electronics Department, during the second week of May 1966, with the following results:

Counselor and instructor recommendation	N	Percent	Aptitude tests retesting	
			Average retest (total battery score)	Average gain (standard scores)
Recommended for electronic technician:				
Regular status	6	43	82 M	12
Probationary status	7	50	73 L	5
Total	13	93		
Not recommended:				
Dropped—no progress	1	7	64 BC	4
Total	14			

Discussion.—The greatest difference in gains on individual test factors between those recommended for clear status and those recommended for probation and the one student dropping due to lack of progress were in visualization, mathematics (shop math and algebra), and vocabulary and fluency.

It appears that the curriculum is advantageous to the students, enabling them to reach entry into Electronic Technician training through this avenue of preparation. The per cent recommended for continuance is exceedingly high. The per cent recommended for continuance in regular status increased in this semester.

Nursing home assistant

Entry into the Licensed Vocational Nursing program has been set at a cutting point of 11.5 grade placement on the vocabulary section of the California Achievement Test. Eleven students failing that level but scoring at 10th grade or better on the vocabulary section, were enrolled in the Home Nursing Assistant curriculum in February, 1966. These students were retested in June 1966 and counseled by Mrs. DeLong, counselor for the Nursing Department, with the following results:

Counselor and instructor recommendation	N	Percent	Average gain in vocabulary score (Cal. Ach.)	Average gain in comprehension score (Cal. Ach.)	Gain in reasoning scores (progressive matrices)
Recommended for LVN:					
Clear status	1	9			
Probationary status	1	9			
Total	2	18	9	6	7
Recommended to hospital for nursing aide	1	9	5		−2
Recommended for retesting to another area; no potential for nursing in the judgment of the nursing department	8	73	0	7	7

The course does not appear to be of much assistance in leading to LVN training—there is little improvement in vocabulary skills required for the State Board licensing examination in LVN. Of the eight who did not qualify for entry into the regular class, follow-up showed: 5 working (1—medical assistance in Job Corp, 1—medical laboratory, 1—hospital, 1—convalescent home, 1—sanitorium). Three students had moved.

SELECTION AND GUIDANCE OF VOCATIONAL STUDENTS AT LOS ANGELES TRADE-TECHNICAL COLLEGE

(By Margaret L. Crawford, Ed. D., Mar. 13, 1965)

Present day research points to the multi-factor nature of intelligence. In 1950 Los Angeles Trade-Technical College began a testing and guidance program based upon the approach that man possesses many different kinds of intelligences and that these intelligences are identifiable and measurable by standardized tests of relatively "pure" abilities. Using job analysis, the necessary intelligence factors for success in specific occupations are determined. Aptitude tests measuring these specific factors are combined then into aptitude test batteries to assess an individual's potentional for specific occupations.

During the last fourteen years Los Angeles Trade-Technical College has developed and validated such aptitude test batteries for some fifty-five trade and technical curricula. Testing over 8,000 applicants annually, norms are now of considerable size. The test batteries are derived from a core of twenty-one separate tests measuring various factors. Batteries are constantly subject to check, revision and improvement.

As an example of the program, let us take the development of the aptitude test battery used for the selection of Electronic Technicians. Job analysis revealed that the technician inspects and fits parts, makes calculations, reads prints and schematics, trouble shoots and works with others on a team.

A check on the psychological factors involved in successful performance revealed that measurement of verbal ability, space visualization, numerical facility, reasoning, dexterity and certain personality traits might be indicated. An experimental battery was administered to incoming trainees. Such a battery will contain more tests than the final battery developed from it.

Upon completion of the training period, instructor ratings of student performance in the course were correlated with aptitude test scores. The factors chosen for the final battery were those showing the greatest relationship with the teacher ratings and the least correlation with each other. Beta weights are determined by the Doolittle method and a conversion table changing all possible raw scores of standard weighted scores is developed. A percentile table is developed based on the total battery scores of the experimental groups, and ratings of high, middle and low are determined from above the 66th, between the 66th and 33rd, and below the 33rd percentile respectively. The cutting score is the 33rd percentile. Using the scores of fifty-five students, the following factors were selected for the final battery:

Science Research Associates, Mechanical Aptitudes Shop Arithmetic	r_{bis} .40
Guilford-Zimmerman Aptitude Survey, Part 6 Spatial Visualization	r_{bis} .43
Progressive Matrices (Non-speeded and non-verbal reasoning)	r_{bis} .43
Primary Mental Abilities Word Fluency	r_{bis} .38

This aptitude test battery administered to beginning students and requiring one and one-half hours of testing time, was found to have the correlation Multiple R .68 between the total battery scores and performance ratings of class achievement as determined by grades at course completion.

The selection process used involves both the testing program and an applicant-instructor-counselor interview. In the latter such factors as health, age, work experience and training are considered. In general, those applicants are accepted for training who make a total battery score equivalent to a total battery score at the 33rd percentile or above based on norms developed on the experimental group. Those applicants scoring below this cutting point are referred for further counseling. Such applicants are encouraged to investigate other offerings of the college more consistent with their abilities. Some may be counseled toward adult education classes to improve basic skills and then return for retesting at a later date. Each person tested receives the benefit of an individual review of his test results through the interview with the counselor and an instructor teaching in the curricula for which the applicant has tested.

The testing and guidance program at Los Angeles Trade-Technical College has been successful. Teachers feel that they are getting "better" students; they know more about the potentials of their students (the files are open to them while working with a counselor); there are fewer class interruptions; dropouts have decreased materially and criticism of discrimination is practically non-existent.

The counseling service is available to those who have chosen an occupation, to those who have not yet discovered their vocational interests and to those who find it necessary to retrain for another occupation.

Our experience leads us to believe that this method is valid for selecting vocational students. Cross-validation studies reveal that similar intelligence factors are predictive of success in similar courses offered at other institutions. However, while norms on individual tests are useful from school to school, the weighted total battery score will be useful only in the institution where the regression equation data are obtained due to variability in criteria.

I would like to review with you the application of trait-and-factor theory as we have used it in establishing and validating aptitude test batteries at Los Angeles Trade-Technical College.

As you will recall, this approach is based on the work of many noted researchers. Leading to this point of view was Spearman's hypothesis of the central G or general factor (a central core of knowing and seeing) plus an X number of specific factors; the work of Thordike, who postulated three intelligences—abstract, mechanical and social—and the work on factored mental abilities by Thurstone. Dr. Malcolm MacLean in his article "Intelligences, Not Intelligence—Implications for Counseling" in the April 1953 issue of Education, points out that the report of the Office of Strategic Services "Assessment of Men" correlates the "term intelligence with the effectiveness of any system of mental functions" and that they would then designate the nature or purpose of each distinguishable system by an appropriate adjective such as aesthetic intelligence, social intelligence, scientific intelligence, administrative intelligence, mechanical intelligence", etc. They would then "designate by a suitable term each separate function (i.e. ability that is involved in the operation of each system such as observational ability, evaluative ability, interpretive ability, memory ability, conceptual ability, imaginative ability, logical ability, predictive ability, planning ability, manipulative ability, etc."

Dr. MacLean has made a plea here that counselors working with the concept of "many kinds of intelligences each supported by multiform clusters of supporting abilities, interests, attitudes and value systems", will focus on the importance of the need for the highest development of every kind of talent among the people of a democracy to give the greatest personal satisfaction to the individual and the fullest service to the community and that in so doing we will cease to try to compare things that have no rational basis for comparison. As MacLean points out, we can compare one surgeon with another, one machinist with another, but we have no basis of comparison in saying that the surgeon is better than the artist, is better than the machinist, ad infinitum. And to quote him further, "No man, though he wears a Phi Beta Kappa or a Sigma Xi key, is an expert in all things." But we tend to think in these directions, so let us not be guilty of talking in terms of the "academic mind" or the "handed individual", but "let us assess all of the abilities, interests and potentials of the individual that we can possibly measure, going into finer and finer differentiation in order to do a better job of synthesizing and integrating these measurements into a judgment to assist us in assessing and in helping other human beings."

On the overhead projector I have examples of some aptitude test batteries used at L. A. Trade-Technical College to assist in the selection of trainees for some fourteen different curricula. The criteria used were instructor grades. Biserial correlation coefficients were the coefficients usually computed. We now have available a program on the 1620 computer which gives us the correlations and intercorrelations we need, using up to 25 variables. (See batteries on following pages.)

SIGNIFICANT CORRELATIONS APTITUDE TESTS AND INSTRUCTOR GRADES

Test	Correlations		
	M	σ	r_{bis}
Aircraft mechanic (N=119):			
Primary mental abilities:			
Verbal	---------	---------	[1]0.19
Space	---------	---------	[2].29
Reasoning	---------	---------	[2].29
Word fluency	---------	---------	[1].21
Progressive matrices	---------	---------	[2].38
SRA mechanical aptitudes: Shop arithmetic	---------	---------	[2].26
Guilford-Zimmerman aptitude survey:			
Part 6—Spatial visualization	---------	---------	[2].38
Part 7—Mechanical knowledge	---------	---------	[2].34
Guilford-Zimmerman temperament survey M factor	---------	---------	[2].28
Battery used:			
Progressive matrices	---------	---------	----------
SRA shop arithmetic	---------	---------	----------
G-Z spatial visualization	---------	---------	----------
G-Z mechanical knowledge	---------	---------	----------
PMA verbal	---------	---------	----------
Validity check:			
N=124 aircraft powerplant mechanic	---------	---------	[2].53
N=119 aircraft airframe mechanic	---------	---------	[2].58
Auto mechanic (N=201):[3]			
Army general classification test:			
Arithmetic	32.0	8.25	[2].36
Blocks	30.0	7.13	[2].40
Guilford-Zimmerman aptitude survey:			
Part 4—Perceptual speed	38.4	8.98	[2].24
Part 7—Mechanical knowledge	34.5	8.38	[2].20
Validity check, N=201	---------	---------	[2].46
Other significant tests:			
Industrial psychology memory	32.6	10.97	[2].19
AGCT verbal	25.1	7.51	[2].23
G-Z Part 5, spatial orientation	17.1	9.18	[2].22
Body and fender repair (N=115):[4]			
Dexterity—Coordination of both hands	---------	---------	----------
Guilford-Zimmerman aptitude survey:			
Part 4—Perceptual speed	---------	---------	----------
Part 7—Mechanical knowledge	---------	---------	----------
SRA mechanical aptitudes: Shop arithmetic	---------	---------	----------
Army general classification test: Blocks	---------	---------	----------
Minnesota revised paper form board	---------	---------	----------
Validity check, N=115	---------	---------	[2].33
Chef training (N=113):			
Army general classification test:			
Arithmetic	28.1	7.90	[2].59
Blocks	25.1	8.20	[2].57
Guilford-Zimmerman aptitude survey: Part 4—Perceptual speed	32.8	14.0	[2].37
Guilford-Zimmerman Temperament Survey: F factor	16.8	5.32	[2].21
Correlation, total battery, R .65	---------	---------	----------

See footnotes at end of table, p. 337.

SIGNIFICANT CORRELATIONS APTITUDE TESTS AND INSTRUCTOR GRADES—Continued

Test	Correlations		
	M	σ	r_{bis}
Cosmetology (N=80):			
Dexterity—Assembly of small objects			[1] 0.37
Guilford-Zimmerman aptitude survey: Part 4—Perceptual speed			.39
Progressive matrices			.31
Army general classification test: Blocks			.52
Industrial psychology—Factored aptitude series: Memory			.25
Farnsworth-Munsell 100 hue test of color vision [5] (error score)			−.48
Validity check			[1] .55
EXPERIMENTAL GROUP			
Cosmetology (N=57, R .74):			
Progressive matrices	43.8	7.7	0.31
Graves design judgment	52.3	14.3	.22
Farnsworth-Munsell 100-hue test of color vision (error score)	32.2	24.8	−.29
Primary mental abilities:			
Verbal	33.7	8.0	.47
Space	17.8	10.7	.27
Reasoning	14.4	5.5	.29
Number	21.4	9.4	.45
Word fluency	48.0	14.6	.34
Guilford-Zimmerman temperament survey:			
G—drive	17.8	5.7	.48
P—Personal relations	15.9	5.9	.33
Dexterity—Preferred hand	63.5	5.6	.36
Validity check, N=163, r. 45			
Electronics technician (N=55): [6] Significant tests:			
SCAT quantitative	29.2	8.99	[1] .25
Progressive matrices	43.4	7.45	[2] .43
Guilford-Zimmerman aptitude survey, part 6:			
Spatial visualization	26.1	10.74	[2] .35
SRA shop arithmetic	10.6	2.89	[2] .33
PMA reasoning	13.8	5.12	[1] .28
PMA word fluency	43.0	11.03	[2] .38
Battery: Matrices, G-Z 6, shop arithmetic, word fluency			
Correlation, total battery, R .68			
Fashion design:			
Guilford-Zimmerman aptitude survey:			
Part 4—Perceptual speed			
Part 5—Spatial orientation			
Revised Minnesota paper form board			
Graves design judgment			
Farnsworth-Munsell 100-hue test of color vision			
Varnum selective art aptitude:			
Tone (color value perception)			
Proportion			
Validity Check, r_t .53, N=113			
Machine shop (N=378):			
Guilford-Zimmerman Aptitude Survey:			
Part 4—Perceptual speed	40.0	9.65	[2] .20
Part 7—Mechanical knowledge	33.2	9.40	[2] .40
Dexterity:			
Preferred hand	62.1	6.24	[2] .17
Assembly of small objects	30.7	5.16	[1] .14
Army general classification test:			
Vocabulary	25.7	7.41	[1] .12
Arithmetic	32.1	9.82	[2] .24
Blocks	29.9	5.95	[2] .22
Validity check No. 2			
Machine shop (N=69):			
Guilford-Zimmerman aptitude survey:			
Part 4—Perceptual speed	41.7	11.44	[1] .24
Part 7—Mechanical knowledge	31.9	8.69	[2] .56
Dexterity—Preferred hand	62.1	5.65	.11
Army general classification test:			
Arithmetic	32.6	6.36	[2] .38
Blocks			[2] .355
Guilford-Zimmerman temperament survey:			
A—Ascendence			[2] .33
O—Objectivity			[2] .41
E—Emotional stability	19.4	4.91	[2] .42
Battery:			
Perceptual speed			
Mechanical knowledge			
AGCT arithmetic			
Temperament E; dexterity preferred hand			
Correlation, total battery, R .75			

See footnotes at end of table, p. 337.

EXPERIMENTAL GROUP—Continued

Test	Correlations		
	M	σ	r_{bis}
Mechanical drafting (N=66):			
Guilford-Zimmerman Aptitude Survey: Part 6—Form A	27.8	13.76	[1] 0.29
Progressive matrices	48.2	5.33	[1] .29
Factored aptitude series, memory	37.9	9.43	[1] .24
Cooperative mathematics, skills			
Correlation, total battery, R .48 [2]			
Power sewing:			
Guilford-Zimmerman aptitude survey: Part 4—Perceptual speed			
Dexterity—Coordination of both hands			
Revised Minnesota paper form board			
Industrial psychology—Factored aptitude series—Blocks			
Validity check, r_t .53, N=155			
Radio and television service:			
Guilford-Zimmerman aptitude survey:			
Part 4—Perceptual speed			
Part 6—Spatial visualization			
Part 7—Mechanical knowledge			
SRA mechanical aptitudes—Shop arithmetic			
Industrial psychology			
Factored aptitude survey—Memory			
Validity check, $_{bis}$ .40, N=62			
Technical illustration (N=252):			
Progressive matrices			
Graves design judgment			
Revised Minnesota paper form board			
Guilford-Zimmerman aptitude survey:			
Part 5—Spatial orientation			
Part 6—Spatial visualization			
Guilford-Zimmerman Temperament Survey: T Factor			
Primary Mental Abilities: Reasoning and Space			
Validity Check, $_{bis}$ .46			
Vocational nursing (N=58): [7]			
California achievement test: Form W—Total reading	78.1	17.80	[2] .43
Progressive matrices	36.1	8.50	[1] .28
Guilford-Zimmerman temperament survey: G factor—General activity	18.4	3.50	[2] .48
Correlation, total battery, R .58 [2]			

[1] Level of significance, 5 percent.
[2] Level of significance, 1 percent.
[3] Correlations adjusted for restriction of range on N=2052.
[4] Correlations corrected for restriction of range on N=957.
[5] Color test is used as a separate cutoff score and is not included in the total battery score.
[6] Corrected for restriction of range, N=621.
[7] Cutoff of 11.5 grade placement in vocabulary used to refer to remedial English.

In general, we find that we are able to do better job in predicting areas requiring mechanical intelligence. We have had trouble in predicting successful ward performance among vocational nurses. We have had trouble using the speeded PMA with some of our people of limited verbal backgrounds, and in some areas such as Commercial Art, where a certain level of achievement is required, we have been unable to use a standardized test of art achievement and are developing and standardizing our own test for this purpose.

We have cross-validated our aircraft mechanic battery using scores of apprentice trainees from Lockheed and Convair, students from Chaffey College, Mt. San Antonio College, O'Connell Trade-Technical Institute, Oakland City College, Laney Campus, San Jose High School, San Jose Junior College and San Jose State College, Reedley and San Diego Colleges. In general, we have found similar factors to be predictive: reasoning, spatial visualization, mathematics achievement, perceptual speed, etc. The weighting of the factors in a battery, of course, will vary due to the variability of the criteria. We have attempted some work in objective performance testing in this area but it is slow and expensive work.

We have cross-validated the Cosmetology battery with trainees at Riverside College; again, similar factors of intelligence were found to be predictive of success.

We feel uneasy about the inclusion of personality factors in the batteries. Our cross-validities have shown great variability in predicators and in that the low intercorrelations found between ability and personality scores may result in heavy weightings of the personality variables in a battery, a word of caution is due.

The need to assist our students to make wise vocational choices has been complicated by the ever-increasing numbers of young people knocking on our college doors and the need to train our people for more highly skilled technical fields in the face of automation-caused change. We offer the thesis that the multifactor approach to the construction of aptitude test batteries designed to predict successful trainability in specific fields is an economical and justifiable approach to at least one answer to a big problem—the identification of potentially satisfying life work within the capability limits of the human being we are trying to help.

Dr. CRAWFORD. I would like to take this opportunity to bring to your attention some of the innovative programs which have been developed here at Los Angeles Trade Technical College, particularly in the areas of guidance and counseling and curricula for the disadvantaged.

We do a little different type of counseling here at this college than perhaps is generally done.

Where a scholastic achievement test combined with grade point average from high school is probably one of the best indicators for success in academic work in a college, we have found from our experience this is not true insofar as vocational education is concerned.

Some 15 years ago we started development of aptitude test batteries tailored to predict success in specific fields. We now have them in some 60 different occupations, including business education.

We have a staff of 12 counselors. We serve 4,500 day students and a total enrollment day and evening of 15,000.

We have found that vocational teachers with adequate training make excellent vocational counselors.

The staff we have, with the exception of one lady who is a registered psychologist in the State of California, all came to us as vocational teachers.

Many of our vocational teachers who have become vocational counselors have obtained their degrees, some of them have gone on to obtain the master's degree and some to meet the requirements of the pupil personnel credential—others are preparing themselves for these degrees and credentials.

We feel that a vocational teacher can better counsel in his own trade or technical area and we assign this person to that department.

For example, the lady who handles our rehabilitation program is a former RN. She has taught our LVN program, and she is one of our mainstays in the counseling department.

One of our counselors was a vocational teacher in auto body and fender. He was supervisor of Muller Bros. Body & Fender Shop in Los Angeles for many years.

Our counselors are well qualified as counselors through training and, in that they have been vocational instructors, they are especially qualified as vocational counselors through experience.

Our plan to assign a counselor to the trade area in which he is a specialist accomplishes two things: it gives the student an opportunity to obtain accurate guidance information and it also establishes rapport between the guidance office and the faculty.

Our plans for articulation with junior and senior high schools have been most successful. We have two counselors assigned the specific duties of college tours for these students and school visitations using an audiovisual approach—a program of colored slides combined with lectures and demonstrations of vocational opportunities.

Students from our college often go on these visitations. They seem to relate well to the younger students in the junior and senior high schools.

We also bring these young students into our college on the guided tours.

We had 1,200 high school graduating seniors enroll in our college last semester. This plan has resulted in an increasing number of these students attending our college. It really works.

We could improve this articulation by the use of video tapes showing occupations available in industry and relating those to the training given in our college. We would like to work with the Industry Education Council on this plan. We have close contact now with the Industry Education Council, and feel that they could be of great help in providing the industrial background for these video-taped sequences.

We plan to take these tapes into the school, use them for small group discussion and obtain feedback from the students on the program. We feel this would improve articulation and enrollment. This plan would require added moneys.

Our counseling program provides continuous testing. Applicants are interviewed within 2 days after testing. Their scores are interpreted during an interview with the counselor and with an instructor from the field of instruction in which the student has shown interest.

Our aptitude test batteries are composed of standardized tests. The test factors are those that have been found predictive of successful training. For example, in offset press where one must match inks, fine color discrimination is needed. We use the Farnsworth-Munsell color test—we also use this test for selection of fashion design trainees where the student must match fabrics.

Aptitude test batteries for vocational fields require measures of specific traits and factors that relate to the occupations and not just measures of verbal and mathematical ability usually used for prediction of academic achievement in colleges.

We approach the problem through job analysis. Then we administer factored tests representative of the abilities necessary to do the job. We correlate ratings of performance with test scores, choosing those factors most predictive of successful training. These are combined into a test battery for predictive purposes and used in student selection.

In addition to the testing program we have the interview, after which the student either is taken into class immediately—this is important because the longer you wait the more loss you have—or if he has not qualified, he goes into our new programs, which I want to talk with you about.

The assistant programs are innovative programs designed to assist disadvantaged students.

About 2 years ago Mr. Wilber, who is the president of our college, instituted basic occupational training combined with remedial instruction in English and arithmetic for those applicants who had an interest in trade and technical training but lacked the measured abilities to succeed.

The program started 2 years ago. About one-third of our applicants did not qualify for the regular programs. We knew that the numbers of people in this lower group were going to become larger. These were the people for whom the assistant program was developed.

Mr. Wilber decided to set up training programs at the college which would capitalize on the motivation of these people, develop some skills which would lead into low-level jobs in industry, give them some realistic assessment of their abilities and, hopefully, increase the skills and understandings of some of them so that they could profit from training in the regular trade and technical training programs.

The program started in the fall of 1965 with two departments, vocational nursing and art. Teachers were carefully chosen to handle this program. They were persons judged to be excellent teachers and dedicated to student welfare. We now have 10 departments using these assistant programs.

Our counselors work closely with the instructors of these assistant classes. Information on the strengths and weaknesses of these applicants are given to the instructors. The same counselor works with the same instructor and students all the way through the semester.

At the end of the semester, these students are retested. Those who qualify by retest or by instructor recommendation are channeled into the regular programs. This gives them five semesters of training. We have found, over a period of time, that approximately one-third of the students in the assistant programs are able to qualify by retesting at the end of one semester's work and another third are recommended for continuance—on probation—by the instructor. Of the students entering the regular programs in this manner, about one-half are successful and able to continue in the regular programs. Those who do not succeed, and the one-third who do not qualify for entrance into the regular programs after one semester's work in the assistant programs, are either sent to the placement office for low-level entry jobs in industry, recounseled to other goals, or referred to other agencies for additional remedial training. The door is always open for them to return and qualify.

The point is to take all these people into a lower level entry job or direct them for further counseling, if this is what they want. We work through our placement office and our counseling office with these people.

The programs have been successful because these people are highly motivated. Motivation is the key. These people feel they are getting a chance to learn what they want to learn. We have less dropouts in these programs than any other program in the school.

A youngster who has failed English or math all the way through school may succeed in remedial programs if the English and math are related in meaningful ways to the skills program in which he is interested. He becomes motivated toward learning when he finds a reason and a need for the basic tools of English and math.

The students in the assistant programs get an opportunity to realistically assess their abilities in terms of the actual demands of an occupation. This leads to redirection of their interests and goals in some cases.

To recap the assistant programs in operation at our college, let me use some transparencies on the overhead projector.

The rationale of our student selection program is trait-and-factor theory. Instead of using scholastic achievement tests, intelligence tests, and high school grades, we use aptitude tests batteries specifically tailored to predict success in some 60 different trade and technical areas. This is based on the theory that man possesses many different kinds of intelligences, plural, and that these are related to occupational success. Among these intelligences are academic, artistic, musical, clerical, mechanical, and social intelligences. In our school mechanical intelligence is probably most widely applicable to job success.

Omitting such other intelligences as clerical and artistic which apply to some of our curricula, let us take a look at the factors which compose mechanical intelligence.

We know from research that it is going to include dexterity, ability to visualize, to reason, and to handle certain levels of math and verbal understanding.

The first step in the development of our aptitude test batteries for each specific trade, technical and business area is a job analysis of the occupation. We are assisted in this by the instructors in the department concerned. We are concerned with those abilities that are required for success in the field.

Let us take a look at the development of the aptitude test battery for electronics. In the job analysis the instructors told us that the successful student must be able to inspect and fit parts, to read blueprints, to make calculations, to visualize and troubleshoot a circuit, to work with small parts, and to write reports.

Using this information, we chose an experimental battery of standardized tests which we thought would measure the psychological factors involved in these jobs and which would predict successful training in this field.

So, what we are after here is which tests we can put into this program that will help us say to the student, "You could be a success in this training field."

We found in correlating the test results with instructors' ratings of performance that a battery composed of the arithmetic section of the SRA mechanical aptitudes, the spatial visualization test, form B, of the Guilford-Zimmerman aptitude survey; the progressive matrices and the word fluency of the primary mental abilities test gave us a correlation of R.68. N was 55 students.

This is the way we operate with all our trade and technical programs. We have these batteries for some 60 fields. We are developing aptitude test batteries to predict success in business fields.

We usually accept the upper two-thirds of the students who apply into the regular programs. Within 2 days after testing the applicant appears for his interview with the interview committee. The committee would be made up of the instructor in the field and the counselor. If there is an opening he goes directly to the class. Otherwise, he goes to the waiting list and is called in turn as soon as there are openings.

Unfortunately, we find the longer times we have between the application and the test, the test and the interview, the interview and the waiting list, and the waiting list and the time for the call-in, we lose our applicants. The problem of dropout is usually related to the financial problems of students.

The applicant who fails to score in the upper two-thirds of the group will be placed in the one-semester assistant programs.

After one semester they are retested; as a result of the retesting they may either be accepted into the regular program on clear status, or on probationary status with the instructor's recommendation.

Should they fail that, they go to counseling and are directed to the placement office for low level entry jobs. They may be recounseled into other vocational areas of training, be referred to remedial training with other agencies, or if their motivation is high enough, work at a low level job and attend evening classes and eventually gain sufficient skills to enter the regular programs leading to the associate in arts degree.

So we feel we have a program here to help these people get an entry into some occupation and a real opportunity to get into their chosen field.

As an example of our assistant programs, we are just starting a new assistant program, auto servicing. The curriculum includes basic math, auto servicing principles, trade terms, interpretation of manuals, basic work with tools and equipment, benchwork, and some experience in actual auto servicing of cars. Those who cannot make the regular auto mechanics program will have sufficient skills to become good service station attendants.

We feel this program needs expansion, and we would like to see some work done in this field. Thank you very much.

Mr. HAWKINS. Thank you, Dr. Crawford, for a very excellent statement and presentation. Mrs. Mink.

Mrs. MINK. Yes. I certainly was quite impressed by the totality of your program and the consideration that you are giving to students who initially do not qualify. I am deeply impressed. I wish my own State had such an aggressive program.

I wondered if you could tell me what the total budget for a year is for the trade and technical college?

Dr. CRAWFORD. $5 million for operations.

Mrs. MINK. Or perhaps the extent of Federal assistance you receive. Do you have that information?

Dr. CRAWFORD. I am sorry; I don't. I could get it for you and send it to the committee, if this would be all right.

(The information requested follows:)

Federal support is only 5% of the yearly budget.

Mrs. MINK. You mentioned that this program was something which started recently.

Dr. CRAWFORD. Yes.

Mrs. MINK. How many students who apply are not able to be accommodated by this new program which you have initiated?

Dr. CRAWFORD. We try to keep these programs in small numbers. They work better that way. So, our limit is probably 20 to 25 people at most. Twenty, we hope for.

Now, if you consider we have 10 programs, this is 200 people, and we would have 1,200 high school students coming in. Generally the high school students seem to be doing better than they did awhile ago. So, if you would say instead of losing one-third of these, we might be losing 20 percent, then we are picking up 200 of that.

Mrs. MINK. You mentioned you have taken in 1,200 high school students.

What figure would indicate the number that applied and were not accepted initially into the program?

Dr. CRAWFORD. Well, we are by law in California required to take a high school student. We can't say we won't take you.

Mrs. MINK. If he applies.

Dr. CRAWFORD. Yes. We can say to the 18-year or older person, you must profit from the instruction, but actually with a high school student we attempt to say, this program is not for you, why don't we try this one, but we cannot say—if he said I am coming to your college, we would have to take him, but we try to redirect.

Mrs. MINK. Does your institution require completion of 12 years of education prior to application in your trade technical college?

Dr. CRAWFORD. No; it does not.

If the student is over 18 then they may enter without the high school graduation.

Mrs. MINK. Now, you also testified that your program includes two counselors who make visitations to the schools in the Los Angeles area, and that this has been the reason why you have had such a marked increase for students matriculating here.

Has the program you have complemented the local schools' programs?

Dr. CRAWFORD. Do you mean in the junior colleges or in the high schools?

Mrs. MINK. In the high schools and intermediate schools.

Dr. CRAWFORD. We work very closely with them. As far as high schools are concerned, you have to be invited into them. We try to offer a service to the counselors in the high schools. We bring them in here any time they can come. We invite them to bring their students in. The teachers come in.

We also do work in the evening with the parents. We bring the dads and their sons in, and this type of thing. There is a dinner, and we have a tour of the campus. We tell the story as many ways as we can, and it is a continuous thing because there are so many people coming into Los Angeles all the time we feel we just have to keep doing it.

Mrs. MINK. Supposing under this bill the counseling provision were to be stepped up dramatically and we were able to fund it to provide more counselors in the high school. Would Los Angeles Trade Technical College be able to meet the demand? Now, today, with only two counselors going to the schools you have increased applications to 1,200 students from the earlier figure of only 200.

Dr. CRAWFORD. We would have to have some help, I am sure, in terms of teachers. We are running into a little problem here, locally. We want to expand this program and we feel it is a real need and helps a lot. I don't know what other colleges would do, but we would do all we could to expand this program.

Mrs. MINK. You indicate a frequent long waiting period before a student can be accepted and that this often interferes with his entering the program. What is the average waiting now to get into the college?

Dr. CRAWFORD. It varies with the department. We are requiring each student now take an academic course along with his trade course. We feel this will be helpful in industry, and if they do have to change occupations, they will have a little broader base. So that if a person comes in, let's say, in automotive where we take people in every 6 weeks and change from one instructor to another every 6 weeks, then he is only on the waiting list 6 weeks before he is taken in.

However, he doesn't start his academic until the next semester because academic being as it is, it would be on a one-semester basis, but there is time for them to get it all in.

Now, there are some areas where we have longer waiting lists than other areas. Areas like offset press, for instance, which is extremely popular.

There are other areas where we have to go out and dig for people like drycleaning and power sewing.

Here we work with the State department of employment trying to get them to send us the older people. The high school student is not aware of these programs or is not interested perhaps.

We have some very interesting programs for high school students that are new: Chemical technician, automatic vending machine repair, and plastics technician.

Our problem is the high school counselor doesn't know about them, and we try to get these people in here and show them about it.

I was disturbed in a meeting of the junior college group not too long ago, there were several people there from other junior colleges who had a feeling that the student should not make a decision in the junior college for 2 years, one should wait. I don't think we can wait that long. I feel we have to not say "This is where you go," but "This is what there is, and let us take a look at the offerings and your abilities and your interests and let's at least make some tentative decision and get some skills so you can get out and work."

I don't think it is fair for a student to go 2 years of college and get out and not be able to work.

Mrs. MINK. Are your instructors and counselors here supported to any degree by the Federal Government?

Dr. CRAWFORD. There was one commitment from one of the Federal funding grants that Los Angeles County had, and we had an excellent program here. This was run by Mrs. Wilstock a year ago last April. We had counselors from all over the State, but they came from the North and South, and they were extremely interested in seeing and getting into a school like this where they actually saw the equipment on which the students would be working.

Mr. HAWKINS. Dr. Crawford, is there any link between the high school counselors, your counselors, private industry, and also the Department of Employment?

Dr. CRAWFORD. No, I wouldn't say there is any formal link. The Industry Education Council does assist in this matter, however.

Mr. HAWKINS. Would you think it desirable that private industry whose needs must be met with graduates and also the Department of Employment who would know something about the manpower demands and needs, the high school counselors, some of whom you have indicated don't know about some of the programs that are being offered at the college, and your counselors, would it be desirable there be some link among these groups?

Dr. CRAWFORD. I would think it would be marvelous for the students if we could have free communication among all people who know somethink about the problem.

Mr. HAWKINS. It seems to me if those who should know really don't know we can't blame the students sometimes for bumbling around not knowing what to do.

Dr. CRAWFORD. That is true.

Mr HAWKINS. Mrs. Mink.

Mrs. MINK. One of my concerns is how we get the young people aware of some of these training programs and educational opportunities beyond the high school level. Particularly in my State, I think some of the difficulty is really within the high school program itself.

I wonder if you had any comments you might want to make as to what we might do in this bill, or another bill, that would direct itself to the problem of the high school program and what needs to be done there so that the opportunities to go on further into a college situation such as yours might be more readily known by the students.

Dr. CRAWFORD. Well, I think that anything that you can do to assist the counselors in the high schools to gain first-hand information through industry contacts or through a school such as this, this combined type of information is important.

Mrs. MINK. Do we need to establish a special category known as occupational counseling as distinguished from just general counseling? So many counselors I know in my school system, are so preoccupied with other duties in the school system, such as discipline and various other things, they say manhours are not available for doing in-depth occupational counseling. I wonder if maybe you had some thoughts as to whether a special category needed to be defined as a specialty in the field of counseling which would direct itself specifically to occupational opportunities and work opportunities beyond the high school level.

Dr. CRAWFORD. I would like to see us do something like this, and I would like to see the counselors interest themselves in this field.

You are talking about keeping up with our work. Many of our people work in the summers and work evenings after school, so, that they do keep up, and I think they are more up to date perhaps than some of us might think they are.

I would like to suggest something. It is probably sheer heresy, but it seems to me that if we could go into the junior high schools, and I think this is where the interest first begins to bloom, and if we could say to these students, come over here with your dad, or come over here between let's say four and six when our labs are not in use so much, or on a Saturday, and let's at least put your foot on junior college soil, let's make this big step and see some of the programs actually in operation; let's build a crystal set, if you will, let's learn to solder a wire, let's do something here.

I would like to see us then take this work that they are doing and let's put it over here so that when they come to us we could give them credit by examination.

I think we could bank credit for them, and it would probably work for us.

I think the parents do not understand the advantages. Many of them feel they want their children to go to a 4-year college, and that is fine, but maybe the kid doesn't want to do that, and he will not be able to make it there either.

Mrs. MINK. Are you familiar with the upward bound program?

Dr. CRAWFORD. Yes.

Mrs. Mink. Do you think something like that might be instituted for the vocational institutions?

Dr. Crawford. I think anything you could do to give these kids a grasp would be good.

Mrs. Mink. Thank you.

Mr. Hawkins. Dr. Crawford, I was interested in your statement about the shortage of teachers. Is this a real serious problem?

Dr. Crawford. Well, we find the teachers we need, but I think the problem is one of increasing pressures on the colleges. As Dr. Smith pointed out, the State support is stationary, and local support is where we are getting our money. We have a problem here in our district. There is a revolt as far as taxpayers are concerned, and we are not getting additional money.

Mr. Hawkins. If you had additional money would teachers be available without either at the same time providing some new system of training them such as offering fellowships and other incentives?

Dr. Crawford. I would feel that would be a question better answered by someone other than myself, sir.

Mr. Hawkins. What is the enrollment at the college?

Dr. Crawford. We have 4,500 day and 15,000 approximately day and evening students.

Mr. Hawkins. Is that the total capacity?

Dr. Crawford. Not quite.

We have some afternoon areas here that are not filled. It is difficult to get these folks to come in the afternoons. We have some space open in the afternoons.

I think if you would talk to Mr. Mann, our dean of educational services, he could give you the exact figures on it.

Mr. Hawkins. Do you have a link with the private sector?

Do you have any involvement of industry in the school to the extent of providing equipment or instructors from time to time?

Dr. Crawford. Yes.

This is one of the strong points of the program. We have occupation advisory committees set up in each of these trade and technical areas.

They involve themselves in equipment. They involve themselves in keeping us up to date. They are the source of teachers. They are a wonderful strength of the program.

Mr. Hawkins. What is you placement record?

Dr. Crawford. I would say it is probably somewhere around 80 percent. I think this is right.

Mr. Hawkins. What would the failures be due to?

Dr. Crawford. Well, I think one of the problems is these people drop out from finances, illnesses, and this type thing. If the student goes through and gets to an employment level he is placeable.

Mr. Hawkins. So, the 80 percent refers to the total.

Dr. Crawford. Yes.

I am talking about the total.

Mr. Hawkins. Total student body and not to those who graduate.

Among those who graduate, do I understand the placement record is virtually 100 percent?

Dr. Crawford. This is my understanding.

Mr. Hawkins. So, the situation is if a kid gets into Los Angeles Trade Tech and graduates, that graduate would be placed?

Dr. Crawford. Yes. Then there are placement levels as we go along.

In other words, take the field of cosmetology, for instance. A student could go in and complete manicuring and could be placed, or continue the entire program. This is a different license, but I am talking about in terms of hours of training.

Mr. Hawkins. This lower third you indicated many times required remedial education and had to be retested to get back into the mainstream.

Does this indicate a problem in the high school that has prepared this student?

Is it a failure to have obtained a desirable or let's say a good average education in high school, lack of counseling, or just what is it due to?

Dr. Crawford. Well, we have a good relationship with the counselor in the high school. The man who goes out and does the liasion work, we mentioned his responsibility is to contact the counselor and tell them what the problems are as far as the student is concerned, and he would say to them, in the case of a failure, this student has strength here, but we found some weaknesses here, and doesn't want to take this assistant program.

Now, would you like to recounsel him? Would you like to send him back to test in another area?

We work closely with the high school counselor on this.

Mr. Hawkins. Would you say if the student would be started on his career in a limited sort of way at an earlier level, that is, at the seventh or eighth, or even as Mr. Smith suggested, an interest created at even a lower level, that is, might overcome substantially some of this lower third performance?

Dr. Crawford. Well, I feel the interest has to be started as early as you can get it, but I am not one to feel we should channel these students too early into programs that would limit them in terms of getting a broad education. I would be concerned about this.

Mr. Hawkins. Then you are not suggesting that at the lower than junior high school level, or would you possibly commence it at that point?

Dr. Crawford. I think courses in industrial arts type of thing which is informative to the student but helps with interest, this is fine, but I think if you are trying to get the student placed into industry as early as this level, I think it is too soon.

Mr. Hawkins. Would you agree that let's say the attractions of vocational education should be made available even during the academic—along with the general education so that the individual would know what is available at the junior high school level.

Dr. Crawford. Oh, I think so. I think we need to broaden the information that goes to the student because so many of them have no idea of the vocational education opportunities available.

Mr. Hawkins. And this would be desirable to those who perhaps believe they are going on to college because some of them might not succeed in college and should go into vocational education, and making it available to all groups would perhaps remove some of the stigma sometime attached to vocational education as opposed to professional education?

Dr. Crawford. Yes. I agree entirely.

Mr. Hawkins. Thank you, Dr. Crawford.

The next witness is David Allen, supervisor, trade and technical education, University of California.

STATEMENT OF DAVID ALLEN, SUPERVISOR, TRADE AND TECHNICAL TEACHER EDUCATION, UNIVERSITY OF CALIFORNIA, LOS ANGELES, CALIF.

Mr. ALLEN. Congressman Hawkins, Mrs. Mink.

I have a prepared statement. I will hit the highlights of the statement.

(Mr. Allen's prepared statement follows.)

STATEMENT BY DAVID ALLEN, SUPERVISOR, TRADE AND TECHNICAL TEACHER EDUCATION, UNIVERSITY OF CALIFORNIA, LOS ANGELES

My name is David Allen and I am the Supervisor of Trade and Technical Teacher Education located at the University of California, Los Angeles. I have served in this capacity for the last seven years. I am pleased to have the opportunity to present the following information to the committee.

My discussion will be concerned with the program of teachers in training and will consist of three parts:

(1) The scope and growth of our program due to the impact of the Vocational Education Act of 1963.

(2) The projections of future needs of trade and technical teachers.

(3) Areas of concern.

Scope and growth of the program

We are all aware that a good teacher is the greatest asset of an educational program. Material things such as equipment, supplies, and buildings are necessary and desirable, but in the end it is the teacher-student contact which determines the success or failure of education. From the beginning of federal legislation for vocational education a half a century ago the "good" teacher was sought for trade and technical classes—"good" from the point of occupational competency, personal characteristics, and formal education. Teachers that enroll in our programs come from a wide spectrum of occupations ranging from personal service, public service, trades, industrial, technical, health, engineering, and industrial science occupations. They have been successful on the average of 11 years at their occupations and their average age is 38. They have decided to make a transition from one type of occupation to another, that of becoming a teacher. Our teacher training program, therefore, provides several services:

(1) To assist full-time teachers in the transition from their previous occupation into teaching.

(2) To provide an avenue for schools to obtain qualified individuals as part-time teachers.

(3) To assist teachers to maintain their technical competence and currency with instructional methods and techniques as provided through in-service activities, and

(4) To assist in the development of administrative personnel who in turn provide the leadership for our school programs.

The growth of this program is reflected by an increase of classes within our schools and can be attributed to the impact of the Vocational Education Act of 1963.

Reviewing this growth we see that the enrollments in our teacher training program prior to the enactment of the Vocational Education Act of 1963 consisted of 284 teachers in the fiscal year 1961 rising to 429 teachers during the fiscal year 1962 and to 470 teachers in the fiscal year 1963. This first increase that occurred during 1962 and 1963 coincided with that period in which vocational education legislation was being developed and enacted and at which period schools were preparing in anticipation of the impending legislation. Our program today has grown to 943 teachers, or an increase of 119.6% between the base year of 1962 to the present fiscal year. A yearly breakdown of our growth statistics is included in this written report. Our teacher training program for part-time teachers has also shown a steady increase through the years, increasing from 585 in the 1961 fiscal year to 887 in the 1966 fiscal year. Programs of in-service education facilitate professional growth of our teachers presently employed in vocational education programs throughout the state. These in-service programs, though low in number, due in part to inadequate financing, have assisted in many occupational areas, such as cosmetology, dental assisting, plumbing, carpentry, automobile mechanics, electronics, and machine shop. One example of an in-service program would be a workshop to assist machine shop instructors in up-dating their technical skills in numerical control of machines. Participants in the workshop were employed by various industries throughout the area as numerical control operators. They worked full shifts during the week and were supervised by the coordinator of our workshop program. These instructors would meet on Saturdays, discuss what they had learned, and develop instructional content so that they could then introduce up-dated instruction within their current programs. This workshop lasted for eight weeks and resulted in the issuance of a teachers' guide that has been distributed within the state. This workshop, as many others, permitted an interchange between the industrial community and the teachers.

Another example of community cooperation has been workshops such as dental assisting, where dentists have worked with our teachers and industrial trainers have received assistance in improving their instructional techniques and at the same time, provided our teachers with technical content.

Yet another example of a workshop which resulted from the passage of the Vocational Education Act of 1963 is one that was conducted for vocational educators of the southern states. I have a report of this workshop as well as an eight-month follow-up for the committee. This particular workshop brought to our state educators from other states and through exchange of ideas our teacher training programs were evaluated. These educators, in turn, obtained new concepts and techniques that they are now incorporating in their own teacher training programs.

This discussion is a fleeting view of our program activities.

Fiscal year	Yearly growth	
	Full-time teachers training	Part-time teachers training
1962	429	661
1963	470	785
1964	535	747
1965	782	720
1966	943	887

Projection of future needs

Our projections for the future show an increase from 943 full-time instructors in training as of the 1966 fiscal year to approximately 1500 instructors in training in 1970, or an increase of approximately 59% in the next four years; or, referring to the base year of 1962 of 429 teachers in training, this is an increase of 250%. Our projections also indicate a continuous growth for part-time teachers and this growth will be reflected in approximately 1000 teachers in 1970, which reflects an increase of 52% from 1962 to 1970. The rate of growth of our in-service training programs is also increasing. There are ten in-service programs planned during the next fiscal year. This is an increase over the four or five in-service workshops that have been conducted during the previous years. Our projections indicate the need to increase this activity to at least 100 for a year during the next four-year period.

In addition, our office continually receives requests for individuals who are qualified to become supervisors and administrators in vocational education. We have had difficulty in providing individuals in relation to the requests. Our projection indicates that the need for individuals in this category will increase. If we do not provide an avenue that will permit the training of potential leaders, we may stunt the growth of our programs and this brings us to our areas of concern.

Areas of concern

There is every indication that as the program grows ways must be provided for the assistance of employed teachers for the maintenance of their instructional effectiveness. Financial assistance must be obtained that will provide them with economic security while they are in attendance at workshops and have no source of income. This need for assistance occurs during the summer months during which time the teachers are not receiving a salary for instruction. Should they attend workshops during the school year, then there is a need to assist the districts to obtain a substitute so that the teachers may be released from the classroom. In the area of administrative leadership for vocational education programs, a way must be found to assist capable teachers to attend schools and leadership programs so that they may obtain the necessary background, degrees, and techniques to become employed as the leaders in our vocational education programs. Our concern is thus two-fold:

(1) The recruitment and teacher training of qualified individuals; and after these teachers are trained, the maintenance of their instructional abilities, and

(2) Providing a means of assistance to emerging leaders so desperately needed in vocational education.

It is through financial assistance as now being proposed in legislation that these two concerns can be alleviated and the total growth of vocational education programs can be increased.

I want to thank you for the opportunity to present this information to you and should you need any additional information I will be very happy to assist in any way I may.

Mr. Allen. You will notice in my prepared statement that there are three parts to my presentation: (1) The scope and growth of our program due to the impact of the Vocational Education Act of 1963, (2) the projections of future needs of trade and technical teachers, and (3) areas of concern.

My presentation is concerned with the trade and technical teachers.

I know we all agree a good teacher is the greatest asset to an educational program. Material things such as equipment, supplies, and buildings are necessary and desirable, but in the end it is the teacher-student contact which determines the success or failure of education.

From the beginning of Federal legislation for vocational education a half a century ago the good teacher was sought for trade and technical classes—good from the point of occupational competency, personal characteristics, and formal education.

Teachers that enroll in our programs come from a wide spectrum of occupations ranging from personal service, public service, trades, industrial, technical, health, engineering, and industrial science occupations.

We get people with varying backgrounds and varying work experiences and different degrees of educational backgrounds.

We find through studies of the professional backgrounds of our teachers that they have on the average of 11 years' occupational experience, their average age is 38 when they come to us, and they have decided to make a transition from one occupation into another. Therefore, our teacher training program provides for several services:

(1) To assist full-time teachers in the transition from their previous occupation into teaching.

(2) To provide an avenue for schools to obtain qualified individuals as part-time teachers.

(3) To assist teachers to maintain their technical competence and currency with instructional methods and techniques as provided through in-service activities, and,

(4) To assist in the development of administrative personnel who, in turn, provide the leadership for our school programs.

The growth of this program is reflected by an increase of classes within our schools and can be attributed to the impact of the Vocational Education Act of 1963.

Reviewing this growth we see that the enrollment in our teacher training program prior to the enactment of the Vocational Education Act of 1963 consisted of 284 teachers in the fiscal year 1961, rising to 429 teachers during the fiscal year 1962, and to 470 teachers in the fiscal year 1963.

This first increase that occurred during 1962 and 1963 coincided with that period in which vocational education legislation was being developed and enacted and at which period schools were preparing in anticipation of the impending legislation. Our program today has grown to 943 teachers, or an increase of 119.6 percent between the base year of 1962 to the present fiscal year.

A yearly breakdown of our growth statistics is included in the written report given to the committee.

Our teacher training program for part-time teachers has also shown a steady increase through the years, increasing from 585 in the 1961 fiscal year to 887 in the 1966 fiscal year. This is not as dramatic as our full-time teachers, but there is a constant increase year after year.

For example, in the last two years in our high schools we have 450 teachers who have come into the program that resulted from the passage of the act.

We find that in the area of in-service programs that these programs are low, and one of the main reasons is inadequate financing. We operate approximately four or five workshops a year and are planning now to operate 10 in the coming year.

Examples of these workshops vary. One that I would like to bring to your attention is where we had jobs for machine shop instructors to assist the machine shop instructors in updating their technical skills in numerical control of machines. Participants in the workshop were employed by various industries throughout the area and were employed as numerical control operators. They worked full shifts during the week and were supervised by the coordinator of our workshop program.

These instructors would meet on Saturdays, discuss what they had learned, and develop instructional content so that they could then introduce updated instruction within their current programs. They had financial support through employment in industry and a chance to learn new industrial techniques through their employment experiences. These experiences were discussed at workshop meetings held on Saturdays and through joint efforts, concepts of numerical control was prepared for introduction into their teaching.

We have this opportunity to help update instruction in just one area of many areas that need upgrading.

We have done work with dental assistants where we bring dentists in to help improve dental assisting instruction.

Another example of a workshop, which a copy of the workshop report has been given to you, is one where we have brought in educators from Southern States who had been in teacher training themselves on the average of 18 years. They came to our program at UCLA because of some of the things we are doing in our program. They came to see what we are doing and identify things they could do and take back with them, and they also helped us to evaluate our program to see how we might do things differently, and this became a two-way source.

I have for you in my report, as you noticed, a growth record of our program by fiscal years.

We see from our projections an increase from 943 full-time instructors in training as of the 1966 fiscal year to approximately 1,500 instructors in training in 1970, or an increase of approximately 59 percent in the next 4 years. If we were to refer this to our base year of 1962 you would find a 250-percent increase, which shows the impact of the act.

Our projection for the part-time teachers in 1970 is 1,000 teachers in relation to 800 today, or a 52-percent increase.

O~~ur in-~~service programs, because of the needs, are already planned for 10 this year in relation to four the years before, and we feel in the next 4-year period we need at least 100 more of these, and these are by occupational or activity groupings.

In addition to this, there is a need for financial assistance to qualified individuals to be trained as supervisors and administrators of vocational education.

We find in the are of qualified individuals to become supervisors and administrators there is a lack. We have requests not only in California, but we receive requests from other States asking for trained individuals to take leadership positions. Unfortunately we are unable to fill the requests.

I would like to conclude with these two concerns as I see them:

(1) This is in the area mentioned earlier today. That is the recruitment of teacher training of qualified individuals; and after these teachers are trained, the maintenance of their instructional abilities.

(2) Providing a means of financial assistance to train emerging leaders so desperately needed in vocational education.

If we do not have both the teachers and the leaders then I feel, regardless what we do in a program, we will suffer.

I want to thank you for this opportunity to present this information to you.

Mr. HAWKINS. Thank you, Mr. Allen.

Mrs. Mink.

Mrs. MINK. In this teachers' training program that you now have at the University of California, do you provide financial subsistence for the full-time teachers who are in your program?

Mr. ALLEN. No; we do not. We have no way of paying for their subsistence while they are in training, because of the amount of money that we have for teacher training and because of the numbers of people we have involved in the programs we have no way of giving them financial assistance.

However, it is this period in a person's life when they have taken a cut in pay to come into teaching and not being able to work while going to school that there is a need for financial assistance.

Mrs. MINK. Do I understand correctly from your response that the 943 teachers who are in your program who are full-time teachers already in the system, receive no subsistence allowances or salaries?

Mr. ALLEN. That is correct.

Mrs. MINK. Or encouragement to participate?

How do they survive?

Mr. ALLEN. Well, we all went through that problem. I made the transition from industry to teaching. I had to find myself a job and support my family while doing this. This is a problem. This is one of the things that hurts.

Mrs. **Mink**. The list you have for part-time teachers in training, 887, I take it that these are employed otherwise?

Mr. **Allen**. That is correct.

Mrs. **Mink**. In industry, and are coming into your program anticipating a possible move into teaching.

Mr. **Allen**. No; these are people that teach in what we call part-time classes for adults or individuals who come in to upgrade themselves in the evenings.

They hold a full-time job in industry, and they may teach 3 to 6 hours a week rather than full time as a teacher.

Mrs. **Mink**. Are these part-time teachers in training, the 887, also working while they are in training?

Mr. **Allen**. Yes. They receive 60 hours of teacher training.

Mrs. **Mink**. What about the full-time teachers, the 943, are they teaching also in institutions while undergoing training at the university?

Mr. **Allen**. If they are in the program during the summer session some do teach summer session. They have a summer session assignment. Others have no employment other than another job in the summer.

If they are enrolled in the teacher training program during the regular school year, then they are concurrently holding a teaching job and thus have financial support.

Mrs. **Mink**. What percentage of your 943 are teaching in a vocational institution while being in training at the University of California?

Mr. **Allen**. Well, these are composite figures of the summer and regular year. I would say about two-thirds are employed of the people that come to us in the summer session, which would be approximately 550 of that number. You would find about two-thirds of that number have some teaching assignment during the period they are in summer session.

Mrs. **Mink**. How many teachers are there in the Los Angeles area in postsecondary vocational teaching?

Mr. **Allen**. The total number of teachers?

Mrs. **Mink**. To put it another way, what percentage of the total need for of training are you now meeting by having a program which touches roughly 1,700 or 1,800 teachers? What percentage of the total actually are in a training program at the university?

Mr. **Allen**. Our program is designed for individuals who are employed as teachers and begin their teacher training concurrently with their employment in the teaching profession. Thus we serve all the trade-technical teachers during their initial teacher training and again when they participate in our inservice programs.

My statistics reflect numbers of teachers resulting from replacement and program expansion. Mr. Smith's statistics are by programs, rather than teachers, and his statistics are statewide, whereas mine are for the 10 southern counties of the State.

I am sorry. I just couldn't give you an exact figure.

Mrs. **Mink**. Is this information available?

Mr. **Allen**. I believe we can get it for you.

Mrs. **Mink**. Mr. Chairman, could I request that information be inserted at this point in the record?

Mr. **Hawkins**. Certainly. Without objection, so ordered.

(The information referred to follows:)

Full-time teachers, 627; part-time teachers, 716. From annual report of 1966, to USOE.

Mrs. **Mink**. Thank you.

Mr. **Hawkins**. You are familiar with section 6 of the proposed bill, H.R. 8527, concerning fellowships and exchange programs and strengthening of teacher training?

Mr. **Allen**. Yes. I have read it.

Mr. **Hawkins**. Does that approach read the situation to which you have referred?

Is it academic, or would you make any suggestions how that section could be strengthened to reach the situation about which Mrs. Mink has discussed with you?

Mr. **Allen**. Well, I think the intent of the legislation, the way I read it, is good. I find no fault with the concept of fellowships and things of this nature.

The only concern I would have—this question was asked of one of the other witnesses about separating preservice and inservice. My personal feeling is that each State or each locality has varying needs of how much preservice might be needed or how much inservice might be needed. If there is some way that we could have coordination of the program so that the program has direction and emphasis toward prescribed goals, then the proposed legislation would have more beneficial effect and impact than would be the case if the legislation has no coordinating features and is left to the whims of individuals who might utilize the financial support but are not primarily concerned with vocational education.

Mr. **Hawkins**. I think that completes my question.

At this point, in connection with the statements, it would be of help to the subcommittee if we could get from each of you who will testify a definite address to which the transcript can be mailed for correction, and it would certainly help the committee if some of you might be able to consolidate that central point to which the transcripts can be sent.

It is sometimes difficult for us 3,000 miles away to keep in touch with you. Some of you, I know, will want to look at the transcript and correct something which might not be correct as to what you said, and we do intend to send the transcripts to you for that correction, and if we can send several to one address it would certainly simplify the processing of it.

In any event, we do want a specific address to which we can direct these transcripts.

Mr. McCann, may I ask how long a statement you have?

Mr. **McCann**. I think I can do it within 5 minutes.

Mr. **Hawkins**. We will take it at this time and continue the others this afternoon.

STATEMENT OF WILLIAM McCANN, EXECUTIVE VICE PRESIDENT, SOUTHERN CALIFORNIA INDUSTRY-EDUCATION COUNCIL

Mr. **Hawkins**. Do you have a prepared statement?

Mr. **McCann**. I do, and I have attachments.

(Mr. McCann's prepared statement and attachments referred to follow:)

PREPARED STATEMENT OF WILLIAM MCCANN, EXECUTIVE VICE PRESIDENT, SOUTHERN CALIFORNIA INDUSTRY-EDUCATION COUNCIL

It is indeed a pleasure to be invited to appear at this committee hearing, especially as it relates to HR 8527. I propose to reflect the judgment of an individual citizen who is a member of the City Council of Santa Fe Springs and Executive Vice President of the Industry-Education Council.

I would like to preface my remarks by noting items that Industry and the community have done and what Industry and the community will do as it relates to HR 8527, the amendment to the Vocational Education Act of 1963. I would also be remiss if I did not acknowledge that Industry in the community in California would carry out it's role as suggested in the amendment and especially as it relates to Congressman Hawkins' comments which began this meeting.

For the record, and to take a look at activities outside of California, to those men that are now seated with you ladies and gentlemen in the 90th Congress, may I refer you to leaders in the Industry-Education field who now hold positions as Senators of the United States. Senator Paul Fannin, former Governor of Arizona, made several trips to California—one to a meeting at Arrowhead in 1966 in which he met with Industrial leaders of California to set the framework as to how Industry can best respond to educational needs of his state. The leadership provided by the then Governor, now Senator Fannin, has provided the framework of the Industry-Education Council of Arizona.

Senator Javits of New York, working with General Sarnoff, has utilized the resources of the greater area of New York City along the same ends.

Also, until a few months ago it is my privilege to point out that my associate in the midwest was the former Chairman of the Board of Bell and Howell, who mobilized Industry on a bi-partisan basis in Illinois to make the great resources available to the educational community of Illinois. The gentleman is Senator Charles Percy.

In California, Honorable Congressman, may I state that we of the community, we of industry, we affirm our pledge as it relates to vocational education to do all in our power to seek motivation and incentive programs that will relate to the 80 percent that do not find a place in the colleges of our country. We reaffirm this pledge by active programs.

One good example would be a program in the field of Teen Cuisine held in this very school last Friday. This program was to motivate students in the restaurant fields and in some economics to the needs and opportunities in these fields, in the restaurant business and cuisine field and into those economic fields that relate to meal management.

Now that I am speaking of this school, Los Angeles Trade-Tech, a part of the Los Angeles City School District, may I note for the record the budget and the source of funds for this school which must be taken into consideration as it relates to programs throughout the United States, especially when this college is used as the pacemaker in the field of vocational education as it relates to finding gainful employment for young adults.

Los Angeles Trade-Tech College—Sources of funds

	Percent
State contribution	19.0
Federal and State vocational funds	4.0
Federal and Public Law 85-864 (title VIII)	.7
Local Taxes	76.3

I have enclosed in the attached literature certain documents which will substantiate the many existing programs in California, in Industry and in the community that relate to the Vocational Education Act. These programs and the attachments may serve two purposes: 1. To give proof to the fact that the California community has formed a joint partnership with the Educational community on a local basis, on a state-wide basis and on a national basis, working hand-in-hand with the authority that the Congress has provided in this field.

These attachments do substantiate the support in California and further may serve as a motivator or example that may be duplicated in other parts of our great country. The need and the importance of HR 8527 needs very little testimony. One must just reflect on the advancements that have been made since the Vocational Education Act of 1963. However, in looking towards the successful implementation of HR 8527, its success in the nation, its success in the East and its success in the West, may we have the privilege of noting one or two areas of concern.

1. We must chart a realistic course of action for all fields designed to meet the needs of our students, the majority of which will not graduate from college.

There is a need for an immediate and significant increase in the number of technicians prepared for business and industry. By and large, at least two years of education beyond high school are required for technician training and because of the great changes in industry there is need for continuing study of the actual requirements for technicians.

The entire community must mobilize behind industry and the educators who are now compelled to create techniques for neutralizing unrealistic parent pressures for their children to "get to college" at all costs.

We parents discount the national awareness that far too many students are aiming at, or attempting, traditional college educations and are unable to profit by it. In engineering alone in 1964 enrollment in California Junior Colleges was 11,594, yet only 525 graduated.

We should acknowledge the absolute necessity for skilled manpower and that excellence in vocational training is as educationally significant as academic achievement. We are obligated to get this message across to parents and students if we are facing reality in the educational program.

2. Motivation of adults pertaining to roles of vocational education in American Society. This is a role for every Mayor, for every Councilman, every PTA Leader, every member of Congress and for every other leader of a community. Motivation of the adult should be related to the spirit of '76—the spirit of 1976—for it we are to continue the economic growth, if we are to maintain our gross national product, we must somehow recoup the famous spirit of '76 and relate it to the community and the problems and the implementation of those problems for gainful employment for the majority of our citizens in 1976.

3. The above role of the community in motivation of adults into recognizing the role of vocational education in the American Society can be accomplished through the aid of Congress and HR 8527. I submit, ladies and gentlemen, what has been done in the area of Police Science. There has been, or is being made, a grant to California by Congress and the Administration as to how a community may combat crime. This, specifically, is related to how more young people can be counseled into seeking gainful employment in the field of Police Science.

Through the wisdom and interest of your Congressional Body this can be done in the entire field of Vocational Education. The need for young ladies and gentlemen to enter into the field of Police Science is typical of the encouragement and motivation that is needed in other vocational fields. This type of action, I do believe, would sustain the comments of Congresswoman Mink made earlier, that is, the need for more field work in counseling and more direct programs in counseling, especially as it relates to gainful employment.

4. It is the responsibility of this Honorable Body to set up those safeguards needed to maintain a true return on Congressional investments in this program as in the other program. The program should not be diluted in any way to supplement the income of "Professional Educational Professors" in higher education and/or other segments of the educational community. While research is encouraged, it should be encouraged where the return can be not only measurable but applicable to the problems that face our community and our society today.

5. We submit that Congress should concern themselves with the current survey being conducted with the aid of the Industry-Education Councils, by the Great City Research Council and the Ford Foundation with assistance from the Department of Health, Education and Welfare. All of this knowledge should be included on a factual basis and programs geared to early implementation of these studies.

6. Also, the American Industry project funded by the Ford Foundation and the U.S. Office of Education, being guided by Stout State College of Wisconsin. We will submit additional information to this Body as a matter of record, if permissible at a later date.

7. I also draw your attention to the CASA Survey of California on Industry-Education sponsored projects. This, ladies and gentleman, relates to the California Association of School Administrators working with the Industrial community of California surveying and receiving returns from 87 percent of the schools of California in which they determined their needs on a geographical basis, their needs on a priority basis, their needs in personnel. This pointed out

one fact that is important as it relates to this contemplated legislation in that work experience programs were considered the foremost concern of the educators of California.

I am pleased to say that Industry-Education in California immediately responded and will put into effect the first of September, 1967, a plan to increase on a great percentage basis, and by great I don't mean a hundred I mean thousands percentile, the industry participation in work experience education and as suggested by Congresswoman Mink I would be happy to forward this as a matter of record to your Honorable Body.

Two points that I wish to make along this line is that in California we have responded to the needs education. We have not been one to throw out old programs for the sake of new innovations—not old programs that have been successful such as work experience education—but rather to beef them up, modify them to the needs of the school demands of today. We have also, as the need arises, provided new innovations such as the one illustrated on the attached chart. This program was conceived two weeks ago in this very building at the meeting of the Los Angeles Industry-Education Council. The program will recognize those students who achieve in the field of Industrial and Vocational Arts.

8. One point I would like to make for the record on which Congressman Hawkins has requested an opinion. That is, as it relates to the NYC (Neighborhood Youth Corps) part of the Office of Economic Opportunity, and the work study or work experience program as it relates to vocational education.

In my judgment, there can be no commingling of these programs. From personal experience in which we have employed and I have personally supervised numerous students under the NYC Program and the Work Experience Program. There are many distinct differences between the programs but two very important ones which I would like to relate to you and which may hopefully substantiate the delineation of these two projects are: a. The NYC program, for the greatest portion, relates to working with schools and with nonprofit organizations. The employer deals here with a group of students, some willing some nonwilling, both of which who are hard-core dropouts—students who have been disappointed in the educational opportunities that have been given to them thus far and whose greatest need is individual guidance, individual counseling and not only in the educational area but in personal hygenics, personal dress, their family, and their personal situation. Working with the NYC can be a very exasperating experience. On the other hand all exasperations are forgotten when one success is achieved. This program requires personal concern; it requires many hours of time; it requires dedicated supervision to the betterment of ones neighbor or son and daughter.

b. Work experience education in all three phases as we see it in California: 1. Vocational Education, that which works directly with the future employment desires of the individual student; 2. The General which gives the students an over-all view of an occupation which he may not follow in later years; 3. The Exploratory which gives the students a bird's-eye view of the many opportunities in Industry.

All of these are supervised and under the guidance of the educational community. These are students who are doing this for school credit. These are students who are counseled on what is demanded of them and these are students who, if they don't cut the mustard, are treated as an employee. These are students who are expected to meet a pre-given or pre-established standard. These are students who, in general, will be an immediate asset to the employer with which they are associated and this return can be measured immediately upon participation in the work study program.

So there should be no misunderstanding, it is my opinion in my judgment that the work study—work experience—program should not become integrated with the present NYC Program or vice versa.

9. Your Honorable Body may wish to grant some consideration to those school districts that do have a person who works exclusively on bringing the resources of Industry to the education community on the concept of the Industry-Education Council.

From the experiences in Southern California we can conclusively say that the return on the investment of any funds thus invested would bring a very marginal return on the Congressional investment other than "visable" returns—material and physical resources that cannot be measured—that will influence and motivate young citizens.

10. The importance of vocational education in California is best exemplified by the recent appointment by the Chamber of Commerce of the State of Cali-

fornia of a Standing Committee for Education. This committee will concern itself with two projects, both of which have the 100 percent endorsement of the committee. One is the "Compact for Education." The other is Vocational Education. The Chairman of the Education Committee is Admiral C. F. Horne, President of General Dynamics and Chairman of the Board and Founder of the Southern California Industry-Education Council. The committee is currently conducting an in depth study on vocational education and the comments of Paul Fisher to the Committee are attached for your information.

Your attention should be directed to the March, 1967, issue of Parents Magazine, an article entitled, "Should Every Youngster Go to College?" This article does reflect the need for vocational education as reflected in this proposed legislation as well as responsibility of the community to this end.

"To serve youngsters well, parents, guidance counselors, school administrators and teachers should avoid over-selling college to all students who are good test takers. It is one thing for school officials to remove roadblocks from a student's path, it is another to overrule his personal feelings and desires in urging him to go to college.

"First, parents should realize that children—at all stages of their development from infancy through adolescence—have individual patterns of growth. Each youngster moves toward maturity at his own pace. Not all are ready for college at eighteen, not all will be best served by going to college at any age.

"Parents should ask themselves why they want their sons and daughters to go to college. To keep up with the Joneses? To add to family prestige? To widen their children's social contacts? To enable their young to attain better-paying or higher-status jobs and careers? While there's nothing necessarily wrong with any of these reasons, none of them will carry much weight unless the youngster also wants a four-year college education. And, in any case, though people with college educations generally earn more money and have higher social status, this doesn't always follow. There are plenty of very high income people, and there will continue to be, who haven't gone to college.

"Unfortunately, many of us believe the myth that a college degree is the only passport to a good future—that four years of college is a necessary prerequisite to achieving social and financial success, and that no competent person can be happy if he doesn't get a college education. Believing these things, parents can hardly avoid putting pressure on their youngsters to get a four-year, liberal arts education. Guidance counselors are also enthusiastic spokesmen for college, urging all bright high school seniors to commit themselves to colleges courses. They are also keenly aware that high schools are often judged on the basis of the number of their graduates accepted by the colleges.

"Typically, the number of youngsters who have applied for admission to colleges runs considerably higher than the number of available places. This has the calculated effect of panicking parents into urging their offspring to apply to still more and more colleges.

"High School students who are not ready for college should be helped to continue their education in ways appropriate to them, perhaps in specialized training programs or direct work experience. For example, there are technical schools which offer apprenticeships in many crafts and skills—in home decorating, commerical and industrial designing, and mechanical trades, electronics and so on.

"Educators and parents should actively promote the creation and expansion of institutions other than the traditional four-year colleges and universities. Technical schools and two-year community or junior colleges are admirable alternatives to a traditional four-year program leading to a bachelor's degree.

"In short, though a college education should indeed be available to every qualified youngster who wants one, it should not be forced on those boys and girls who won't benefit from it. College isn't for everyone and to pressure youngsters into thinking that it is is to do them a great disservice.

11. You should give serious consideration to the pilot program that was conceived in California, a civic seminar in which all segments of the community, that is the civic leaders, the elected jurisdictions, school boards, Boards of Supervisors, the Mayors and City Councils, the Industrial people—all segments of the community—sat down and devoted themselves three days as to how best they could help bring all of the resources to bear to aid in solving educational problems at the local level.

In conclusion, may I express the appreciation of the city councils of California and the Industry of California for the invitation extended to me to address this Honorable Body. Thank you.

We must chart a realistic course of action for all fields designed to meet the needs of our students, the majority of which will not graduate from college.

There is a need for an immediate and significant increase in the number of technicians prepared for business and industry. By and large, at least two years of education beyond high school are required for technician training and because of the great changes in industry, there is need for continuing study of the actual requirements for technicians.

The entire community must mobilize behind industry and the educators who are now compelled to create techniques for neutralizing unrealistic parent pressures for their children to "get to college" at all costs.

We parents discount the national awareness that far too many students are aiming at, or attempting, traditional college educations and are unable to profit by it. In engineering alone, in 1962 enrollment in California junior colleges was 11,594, yet only 525 graduated.

We should acknowledge the absolute necessity for skilled manpower and that excellence in vocational training is as educationally significant as academic achievement. We are obligated to get this message across to parents and students if we are facing reality in the educational program.

We must evaluate our own attitudes to insure we are not personally projecting "education snobbery". Sylvia Porter, well-known columnist, reminds us that we should change our own attitude now and forever about the status of an American with vocational training.

The future appears bright for professionally educated teachers, scientists and engineers. But the poet's optimistic words, "Other skies be just as blue" apply to the future opportunity for craftsmen, mechanics, service workers and technicians who learn to practice their skills with excellence. Both groups will have above average earnings—the "pay-dirt" of the pay check. Both groups should enjoy exceptional opportunity for "blue sky" and "pay-dirt".

JOB MARKET PROJECTED

In projecting the job market into the next decade, this is what we in industry see:

1. A continuing rapid growth in white-collar occupations, in professional and technical fields.
2. Only average growth in skilled blue-collar occupations; a slower than average increase in semi-skilled manual jobs; and no expansion in unskilled manual work.
3. A somewhat faster than average expansion in jobs in the service industries.
4. Further declines in the number of farmers and farm laborers.

Teachers who now number about two million, will be in greater demand. It is estimated that there will be requirements for 200,000 more teachers in the next seven years alone.

The number of jobs for scientists, engineers, and technicians, which now total about 1.7 million, will double over the next decade.

In sales occupations, the trend toward self-service stores will slow employment growth in retail shops. But there will be lots more jobs for manufacturer representatives and insurance and real estate salesmen.

After a steady decline in recent years, we see the employment in the mining industries leveling off. Railroad jobs will continue to decline, but employment in the air transport and trucking industries will keep growing steadily.

The greatest need is for technicians. Despite the forecast of an over-all substantial decline in farming, increased job opportunities are seen for professional and technical people connected with agriculture—soil scientists, soil conservationists, and other researchers.

Government employment will continue to rise rapidly, with the big boost seen at the state and local levels. We do not expect the number of federal jobs to rise very much. Emphasis—white collar and service areas.

Construction industry jobs will grow fast. So will jobs in banking as financial institutions continue to expand the variety of their activities and services.

Over the next decade, we expect employment in aircraft manufacturing to decline, with missile production remaining stable and a continued expansion in electronics.

In petroleum, despite rising production, employment will slowly decline.

Implications of the new job forecast are clear. Those who lack higher levels of education are in for rougher sledding than ever in the job market.

Government experts predict that 7.5 million youngsters will not have completed even the eighth grade. This is at a time when unskilled jobs, which once absorbed so many untrained workers, are becoming a narrower field of employment.

The outlook is for a U.S. work force of about 93 million by 1975, an increase of 20 million. The *work force will expand faster than the population* as a whole because of the greater number of young people reaching working age.

Summing up the need will be:

1. Engineering and Science.
2. Teachers.
3. White collar.
4. Service areas.
5. Technical.

THE PROBLEM

Joblessness

The grim statistics prompting realistic action at the Santa Fe Springs level are that nearly one of every six teenagers in the United States who wants to work can't find any. Nearly half of today's 800,000 seeking teenagers are dropouts; the jobless rate among those unschooled, unskilled youths is close to 30% up from 12% five years ago and apparently the entire situation will get worse.

The number of persons in the 20–24 age bracket will increase by a dramatic 54% in the 10 years to end with 1970.

The 14–19 age group will expand by 42%.

At this date, about half of the population reaching the age of 18 may be expected to enter the labor market. The years just ahead will mark the greatest expansion in history for the labor force.

The decade is bringing approximately 15 million new job-seekers into the picture, expanding the labor force 22%.

For every additional teenager who sought work in the '50's, there will be 14 in this decade of the '60's, based on prevailing patterns.

The crisis

This startling statistic stands out in sharper intimidating boldness when one considers the fact that jobs usually filled by young men and women, in unskilled, semi-skilled and domestic areas, are contracting.

Technology is on the march and the legions of ill-prepared will be the first to be trampled underfoot.

Survey of Industry-Education Cooperation—California Association of School Administrators

With the cooperation of the Northern and Southern California Industry-Education Councils, the California Association of School Administrators is undertaking a state-wide survey to determine the status of industry-education cooperation in the public schools. Answers are sought to such questions as the following:

1. What projects and activities are being conducted?
2. What programs are of greatest value?
3. What types of programs would educators like to have?
4. Who are the coordinators of industry-education programs?

The results of the survey will be analyzed in terms of geographical areas. These will include: (Possibly use County Superintendents Area breakdown)

1. North Coast.
2. San Joaquin-Sacramento Valleys.
3. San Francisco Bay.
4. Central Coast.
5. Los Angeles.
6. San Bernardino-Orange Counties.
7. San Diego-Imperial Counties.

Outcomes of the study may encourage school districts which have not previously participated to initiate industry-education programs and provide a basis for districts to evaluate present programs. In addition, the survey results should serve as a catalyst in bringing together the resources of industry and the community in meeting local school and pupil needs. Leaders of CASA and the Industry-Education Councils will develop specific programs to coordinate cooperative activities conducted by schools and industry.

Superintendents of California public school districts are requested to complete the enclosed questionnaire and to return the material to Dr. James Corson, Executive Secretary, CASA, by April 1, 1965.

ROBERT E. JENKINS, *President,*
California Association of School Administrators.

CALIFORNIA ASSOCIATION OF SCHOOL ADMINISTRATORS,

Date: ______________________.

To: Dr. James H. Corson, Executive Secretary, California Association of School Administrators, Burlingame, Calif.

Subject: Participation in CASA industry-education survey

The information on the following pages has been provided in response to your request for participation in the CASA survey of industry-education cooperation.

______________________ School District

______________________ *Superintendent.*

______________________ Geographical Area Code

PART I.—*Industry-education programs now being conducted*

By checking the appropriate spaces below, indicate your evaluation of the industry-education programs now being conducted by your school district. However, review the glossary on the last page of this questionnaire prior to making the evaluation.

Program	Unaware program exists	School district participates	Valuable (only those participating)	Should receive priority	Needs more assistance of industry	Little or no value
Advisory committees						
Atomics Science Youth Day						
Audio-visual materials						
Biomedical education						
Boys' Day in Industry						
Business and industry days						
Career guidance center						
Chemical Progress Week						
Christmas lectures						
Committee For Advanced Science Training						
Community Career Conference						
Community Resources Workshop						
Conference on the Atom						
Conferences						
Demonstration-lecture teams						
Educational fairs						
Engineers' Week						

PART I.—*Industry-education programs now being conducted*—Continued

Program	Unaware program exists	School district participates	Valuable (only those participating)	Should receive priority	Needs more assistance of industry	Little or no value
Exploratory Science Laboratory Program						
Fair Enterprise Medallion						
Gifted Student program						
Guidance Program						
Industrial and vocational arts						
Industry on Parade						
Job-scholarship program						
Local I–E Conference						
Manpower Conference						
Medalist Award						
Military Science program						
Plant tours						
Science fairs (California)						
Science fair (local)						
Science project centers						
Science/technical journals to schools.						
Science/technical library plan						
Speakers' bureau						
Student programs						
Summer employment for teachers and students.						
Surplus equipment						
Survey of job opportunities						
Teaching aids						
Teacher for a day						
Teacher institutes						
Teacher recognition						
Teacher workshops						
TV education study						
Visiting scientists						
Women's space symposium						
Work experience						

"This list is not to be considered complete. You are encouraged to list other industry-education cooperative programs which are of great value. We have not listed such annual items as "Public School Week", "Law Day", "National Business", "Women's Week", etc. If you have a program which you feel is the type which educators desire, we trust you will list these also.

PART II

Recognizing the day-to-day changes in technology and other fields—from accounting to science—please provide the information requested below. Keep in mind such questions as the following: What type of assistance in industry-education is most needed by your school district? What new ideas or approaches to industry-education cooperation do you believe would be of greatest value?

A. *Physical Resources* (Equipment, library books, etc.). ______________________

B. *Programs* (Engineers' week, science fairs, etc.). ______________________

C. *Personnel Services* (Speakers, counselors, etc.). ______________________

(If more space is needed, please attach additional sheets.)

PART III

ASSIGNMENT OF PERSONNEL TO COORDINATE INDUSTRY-EDUCATION PROGRAMS

1. Has your district designated a school official to act as coordinator (or perform any other role) of industry-education programs?

______ Yes ______ No

2. If answer is yes, please enter name or names below:

______________ Name ______________ Position

______________ Name ______________ Position

3. Have industries in the area of your school district designated individuals to coordinate their relations with schools?

______ Yes ______ No

4. If answer is yes, please note names below: (Attach additional sheet if necessary.)

Use:	*Name*	*Position*	*Industry*
	______	______	______
	______	______	______
	______	______	______
	______	______	______
	______	______	______
	______	______	______
	______	______	______
	______	______	______

PART IV

EXTENT OF INDUSTRY COOPERATION WITH SCHOOL DISTRICT

In the spaces below, please indicate the extent of industry cooperation received by your school district.

Class of industry	Industry cooperation					No comment
	Excellent	Good	Fair	Poor	Additional assistance required	
Agriculture						
Architecture						
Law, accounting						
Banking-savings and loan						
Contractors						
Department stores						
Electronic manufacturing						
Industrial manufacturing						
Engineering						
Investment-insurance						
Newspaper-television-advertising						
Petroleum						
Public utilities						
Real estate						
Retail services						
Transportation						
Transportation manufacturing						
School supplies						
Other						

The Board of Directors of CASA and the Northern and Southern California Industry-Education Councils express their thanks for your assistance in the conduct of this important survey. It will have a "return on time invested."

CASA SURVEY OF INDUSTRY-EDUCATION COOPERATION GLOSSARY

(To be used for reference in preparation of Part 1)

Advisory Committees.—Junior Colleges have used advisory committees consisting of representatives from business and industry to help plan occupational curricula, update instructional materials, and describe trends affecting placement opportunities. Such committees are now being used to obtain guidance regarding high school curricula.

Atomics Science Youth Day.—Science students and teachers from each high school are invited to attend either morning or afternoon sessions. The program provides information about atomic energy and its use in power reactors for generation of electricity and for space travel.

Audio-Visual Materials.—Each year, industry offers a great number of free films to school districts. When these resources can be utilized, district audiovisual funds are conserved. Free materials are screened by school district committees. They help to enrich educational resources and provide references that could not be obtained in any other manner; for example, the telephone company provides a great number of appropriate films, and their series of science kits for gifted students also have contributed to classroom instruction.

Biomedical Education.—The Industry-Education Council encouraged the formation of an affiliate organization, the Association for the Advancement of Biomedical Education, to motivate interest in this field and to provide materials to enrich the biomedical and natural science curricula through special programs and related activities.

Boys' Day in Industry.—Business and industry cooperate with the Council for the Promotion of Boys' Welfare. This event is held about May 1. The free enterprise system and career information are emphasized; for example, Los Angeles City Schools arranges plant visits for more than 1500 boys.

Business and Industry Days.—Events of this type are sponsored by the Chamber of Commerce or other business organizations. Students and business education teachers are invited to view displays illustrating the latest developments in business machines, computers, and other office equipment and practices.

Career Guidance Center.—The Industry-Education Council cooperates with county school offices in providing this unique opportunity for students. Booths staffed by professional, managerial, and governmental organizations enable students to learn about many different types of occupations from qualified personnel.

Chemical Progress Week.—Special programs are offered to the schools by the chemical and allied products industry.

Christmas Lectures.—On two mornings during Christmas vacation, students hear talks by four outstanding scientists. Ten students from each high school are invited to attend the sessions as representatives of their schools.

Committee for Advanced Science Training (Summer Research Projects).—Twenty eleventh-grade students in biological sciences are selected for placement in research laboratories during the summer. They are encouraged to work on individual projects. Early in the fall, about fifty percent of these students present reports regarding their research activities at an annual meeting.

Community Career Conference.—A luncheon meeting brings together a gifted high school student, the teacher of his major subject, a university professor in that subject, a graduate student in the field, and an experienced practitioner in the field, providing guidance in the student's proposed profession through a sequential step-by-step preview of his preparation and entry into the profession.

Community Resources Workshop.—Elementary and secondary teachers, counselors and administrators explore the availability of community resources—people, places and things, as aids in teaching, and develop a better working relationship between education and other segments of the community.

Conference on the Atom.—Able high school science students and their teachers participate in conference on inspiring picture and promise of the peaceful atom in its various applications, and to help advance interest in the study of science in the United States.

Conferences.—Each year, teachers and administrators meet with representatives of industry for several days at a conference. They examine how industry and education can work together toward providing more effective education and training for students.

Demonstration-Lecture Teams.—Scientists, engineers, and business and other professional personnel from industry are available for presentation of school demonstrations and lectures, making use of industry equipment not usually available in the classroom. The lectures provide motivation, subject information, consumer education, and guidance.

Educational Fairs.—Exhibits of classroom and extracurricular activities of students in all fields of education, as well as the latest and the best in educational supplies, textbooks, teacher aids, and equipment.

Engineers' Week.—This annual event is sponsored by the Council of Engineering Societies, Consulting Engineers Association, and Technical Societies Council. Its purpose is to develop greater public understanding of the engineering profession and its vital role in the daily life of every citizen and in the future growth of America. Special trips and speakers are provided for schools.

Exploratory Science Laboratory Program.—Experimental summer courses provide opportunitities for students to explore fields of science and make use of community resources.

Fair Enterprise Medallion.—A program of awards initiated to inspire and inform students regarding the opportunities, needs, and qualifications in the field of business and management. Program recognizes those students who are outstanding in the field of economics and functions of the American system, as well as other comparative economic systems.

Gifted Student Program.—I–EC cooperated with a Unifield School District in the planning and arrangements of a summer experimental program for gifted ninth-grade students. The course consisted of six weeks of intensive study of the professional and cultural fields where top talent is needed, and included field trips, classroom presentations by specialists, films, etc.

Guidance Program.—Individual consultants are obtained for students through the Industry-Education Council and other related organizations. Through this program, every student may consult with a person working in the field which he expects to enter. The students prepare for the interviews by writing reports on the occupations from materials in the school library and counselor's files. Arrangements for appointments with consultants are made by an industry-education committee representing many different professional organizations. During the interviews, the students obtain the latest information about the occupations and their potential.

Industrial and Vocational Arts.—Programs designed to advise students and teachers in industrial and vocational fields as to the opportunities, needs and contribution to the community, as well as recognizing future challenges in the vocation and technical fields.

Industry on Parade.—Evening programs are arranged for selected junior and senior high school pupils and their parents and teachers. Demonstrations of scientific equipment and processes are presented, and the need for personnel to develop and use this equipment is discussed.

Job-Scholarship Program.—Scholarships in the form of part-time employment or summer work are awarded to worthy students in fields related to their major interests.

Local Industry-Education Conference.—One-day conferences to acquaint representatives from industry and education with the purposes and program of the Industry-Education Council are held with the ultimate goal of broadening the base of industry-directed resources for school systems and of building strong communication between industry and business and educational institutions, as needed in local communities.

Manpower Conference.—A manpower utilization conference is sponsored with a view to appraising an area's present resources and future needs educationally and otherwise, in relation to use of engineering, scientific, technical, clerical, and agricultural manpower.

Medalist Award.—A program of awards has been initiated to inspire and inform students regarding the opportunities, needs, and personnel qualifications in scientific and technological fields. The program is part of the observance of National Science Youth Month and provides recognition of outstanding students who have qualified themselves to meet future challenges.

Military Science Program.—A program of this type utilizes military resources to supplement school curricula. For example, San Diego cosponsored the Science Cruiser Program with the First Fleet. Plant tours and a luncheon for 60–70 high school boys were arranged.

Plant Tours.—Special educational visits are scheduled to show students how fundamentals of education taught in high school are applied in industry.

Science Fairs (California).—The Southern California Industry-Education Council has enlisted the support of the City of Commerce in prepresenting a California science fair, in which the winners of county and regional science fairs from throughout the State compete for scholarship awards. This event is one of the most outstanding science fairs in the United States.

Science Fair (Local).—Junior High and high school students compete for scholarship awards in local school district, and/or several school districts or county science fairs. Winners of these fairs compete in the California Science Fair.

Science Project Centers.—These centers have been established in several areas. Students work under the guidance of scientists and engineers from industry on projects in such fields as telemetering, ham radio, computer electronics, basic electronics, slide rule, marine biology, ultrasonics, drafting, and computer programming.

Science/Technical Journals to Schools.—Scientific and technical journals are made available to schools by business and industry.

Science/Technical Library Plan.—Industry representatives work with librarians to establish up-to-date collections of scientific and technical books and periodicals in the Public Library. These materials are made readily available to advanced students and other persons in the community. Special libraries also make their facilities available to selected students.

Speakers' Bureau.—Through a cooperative industry-education program, speakers' bureaus are established for the use of schools.

Student Programs.—Summer student training programs which enable students to participate in individual laboratory research projects, aiding and assisting industrial and educational research scientists. Programs range in scope and area of concern, and include NSF programs.

Summer Employment for Teachers and Standards.—Councils have developed a program to help teachers and students obtain summer jobs related to their major fields in business and industry.

Surplus Equipment.—Industries have made available to science and electronics departments surplus equipment and supplies.

Survey of Job Opportunities.—A survey is conducted of personnel needs and job opportunities in a specific area or county. Junior colleges are using the data collected in adapting their courses of study for occupation-centered curricula.

Teaching Aids.—Printed materials, audio-visual materials, product samples, models and exhibits, booklets, charts, posters, etc., all give salient facts of scope of industry, the product, history, scientific or technological information with emphasis on vocational field, historical data, or industry.

Teacher for a Day.—Arrangements are made for scientists and engineers from local industries and organizations to present demonstration-lectures in science classrooms. This program permits teachers to attend a National Science Teacher Conference.

Teacher Institutes.—In this program, the emphasis is upon bringing teachers up to date regarding developments in science. Results of the latest research are provided as soon as security clearances can be obtained. The institutes are presented by scientists and engineers from industry.

Teacher Recognition.—The program is designed to recognize the important role of teachers in the community, to reward extraordinary performance on the part of individual faculty members, and to assist and encourage teachers to strive for the highest degree of professional excellence.

Teacher Workshops.—Workshops which provide the latest information available are used to develop science curriculum materials and teaching aids, and to develop a better understanding of private enterprise and of the economic importance of industry to the community. Many workshops also provide counselors with the latest career information.

TV Education Study.—An extensive research into the possibilities of setting up an educational TV station in the various areas presently lacking Educational Television.

Visiting Scientists.—The program strengthens the education in science by providing competent scientists from industry, university and college faculty, as well as government agencies, to inform students of opportunities in science. Outline distributive educational programs and confer with teachers and school administrators concerning development in curriculum and instrumentation.

Women's Space Symposium.—Girls and teachers from senior high school science classes are invited to participate in this program. Women scientists who have gained recognition for outstanding achievements in space research report on their jobs and career opportunities for women.

Work Experience.—The Industry-Education Council works with state colleges to place teachers from summer counseling classes in business and industry. The Council encourages the cooperation of business and industry with secondary schools in the 4–4 work-study program.

[From Vocational Newsletter, November 1966]

HIGHLIGHTS OF THE WESTERN REGIONAL CONFERENCE

The Research Council of the Great Cities Program for School Improvement held its Western Regional Conference on Education, Training and Employment in Los Angeles on September 26, 27, and 28. Participants at this conference included Research Council staff members Dr. Carl E. Thornblad, Executive Secretary, Mr. Donald M. Brill, Project Coordinator, and Mr. George J. Fuka, Research Associate. Key speakers included Admiral Charles F. Horne, Jr., President, General Dynamics, Pomona, and Past-President, Southern California Industry-Education Council; Mrs. Georgiana Hardy, Member, Board of Education, Los Angeles, Calif. and Dr. Grant Venn, Assistant Commissioner, Adult and Vocational Education, U.S. Office of Education. Also in attendance were the project liaison representatives from the member cities, and their invited guests. These guests included representatives of business and industry, labor, government, civic and minority groups.

Admiral Charles H. Horne, President, General Dynamics, Pomona, and immediate past president of the Southern California Industry and Education Council, keynoted the conference on the topic, "Vocational Education—Issues, Challenge and Change." He called for increasing coperation between labor, industry, and educators in order to get effective vocational education. He observed that the educational program has slighted vocational education in favor of the academic and has failed to provide needed emphasis to the vocational concerns. He explained the organization of the Industrial Educational Council, its growing interests in vocational education. Admiral Horne stated ". . . Don't short change that real basic high school education because it's upon that which all of us wish to build." He stated further that vocational education is needed in high school "because we have to do something to give the kids a chance to be motivated to go on" and continue their specialized training beyond the high school. Admiral Horne sees an increasing development of two year post-high school programs. The keynoter emphasized several broad needs:

1. Better communication between industry, labor and educators.
2. Better determination of what schools can best provide.
3. Do some selling.

In spirited discussion following the address Admiral Horne observed, "Vocational Education tends to be distributed throughout the high school core and those kids who don't show the interest or aptitude for completing high school can add certain types of vocational education which can do them a lot of good. It may provide motivation to go on and learn more of the high school subjects which they have seemed unable to cope with." Admiral Horne expressed concern with the small public interest expressed in the election of board members. Referring to the plight of the unemployables he noted, "I only have two choices, I either have to support them because I can't get rid of them or I have to train them."

Mrs. Georgiana Hardy, a member of the board of Los Angeles City Schools and television personality, presented the charge to the conference. Speaking also as a member of the Executive Committee of the Great Cities Program for School Improvement, she outlined the background and development of the educational program and the work of the Council. She pointed to the glaring weaknesses of the educational program which failed to provided the proper work orientation to the children in our schools. She was also critical of publishers who failed to recognize all strata of society in their publications for school consumption. She pointed to the need of their daily lessons, children in all social levels, the need for the individual to master communication techniques and the basic tools of learning are just as important to enter the field of employment as to continue in the field of education. In regard to industrial relations with the schools she states, "Industry coming and telling the schools what to do is not going to be helpful but industry coming in and working with the schools to develop the kinds of forces, the kinds of skills, that are needed will be of great help. On some occasions we ought to be teaching in the industrial plant after the industrial plant closes because we can not afford to keep up with the kind of modern equipment in the many different fields."

Dr. Grant Venn, Assistant Commissioner of Adult and Vocational Education and author of the book "Man, Education and Work," addressed his topic "Shaping Educational Programs for Employability" in a setting developed around the rapidly changing technology, the population explosion and the increasing urbanization which by 1980 would amount to 80% of the population.

SOUTHERN CALIFORNIA INDUSTRY-EDUCATION COUNCIL

National firms and their allied industries have provided the leadership, the vigor, and initiative to make the California Industry-Education program the Nation's example of unparalleled, effective, cooperation in coordinating civic, business, industrial, and professional leaders in combining their unique resources for the enrichment of education in their respective communities.

WHAT IT IS

It is a non-profit corporation of senior school and industrial leaders who are working together on specific programs to coordinate school and industry cooperation with emphasis on all fields of education.

ITS PURPOSE

In recognition of a mutual responsibility for the motivation and education of our youth, the Council serves as a catalyst to bring the resources of industry and the community to bear directly on the school needs of the local community and its children.

HOW IT CAME ABOUT

It was a result of a conference at Lake Arrowhead in July 1957, sponsored by the National Academy of Sciences, where over 100 educators, businessmen, and scientists met to discuss the critical needs of the schools and what could be done about them.

The pioneering conference was based upon the realization that industry has a vital stake in the education of youth, not only for the general welfare, but for the specific welfare of the companies in all fields who employed educated manpower.

WHAT IT DOES

Serving as a "clearing-house" to both industries and schools for the development of cooperative programs, all councils encourage civic, business, professional, and industrial leaders to offer their unique resources for the enrichment of education in their communities.

Serving the schools

—brings the resources of businesses, industries, and the professions to the schools

—aids schools in understanding changing occupational requirements

—motivates student commitment to educational excellence

—finds ways of recognizing and encouraging better teachers

—provides liaison service between the schools and SCIEC member organizations

Serving business and industry

—advises businesses, industries, and professional societies as to those areas of the educational program which can best utilize their resources

—provides opportunities for community and educational leaders to meet face to face

—broadens the area of business and industry participation beyond their local communities

—advises the policy-making groups in education of specific occupational requirements of businesses and industries

—coordinates requests for support of educational projects

RESULTS—THE RETURN ON INVESTMENT

Many programs have resulted from industry-education efforts. Over forty concurrent programs are available to schools, among which include:

Science Fairs and Exhibits.

Career Guidance Center.

Develop Lecture-Demonstration Teams for Science and other classes.

Provide Resource people for classroom, School Program, Educational Conference.

Assist in providing Laboratory and special equipment for science classes.

Provide counseling for capable and interested students.

Establish Special Workshops for students and teachers.

Medalist Award (for students who achieve to best of their abilities).

Fair Enterprise Medallion (designed for students excelling in Business and Economics).

Sponsor regional educational meeting on new educational techniques and industrial technology advances.

Journalism Award (designed to recognize good writing by students).

Salute to Education Banquet (recognize outstanding teachers whose dedication is making California's educational system foremost in the nation).

Science Project Centers (students work on science projects and classes under guidance of scientists and engineers from industry).

Local Area Councils (within counties to aid in making local resources available to schools).

HOW IT IS ORGANIZED AND SUPPORTED

The Council is managed by a Board of over 60 Directors elected from the membership of its affiliated County Councils and includes leaders from business, industry, schools, colleges and professional societies of Southern California.

The work of the Council is directed by an Executive Committee elected by the Board of Directors.

It is supported by the membership and contributions from schools, businesses and individuals.

GROWTH

From its inception in 1957, as a pilot program, the first of its kind in the nation, efforts and accomplishment of the Southern California Industry—Education Council leaders have received much national acclaim and have served as a "nation's pacemaker". As a pilot program, the Industry—Education Council has been successful in arousing considerable interest in other regions of the nation. Arizona, Michigan, Minnesota, Ohio, the Pacific Northwest, New Jersey, New England and Pennsylvania have responded to the SCIEC example and have established industry—education councils patterned after SCIEC.

Northern California has a flourishing Industry—Education Council and Liaison is established to prevent duplication and enable joint use of resources and programs.

Today, the resources of the I–EC in California are available to all schools of California. After eight years of joint operation between industry and education, an "Industry—Education Sponsored Project" bears the same significance in education as the "Good Housekeeping Seal" related to the housewife.

United States Chamber of Commerce; Department of Health, Education, and Welfare; National Education Association, and other such national authorities are applauding the pioneering work of the National Academy of Sciences in 1957, not only for providing the leadership and guidance for the formation of SCIEC, but the visible achievements of Industry—Education activities. This success of SCIEC has motivated these distinguished national authorities into reseaching the possibility of a national industry—education effort.

PROFESSIONAL GROWTH THROUGH READING

This column will list available information resources and the address from which they may be obtained. The name of any publication deemed helpful to the Vocational Newsletter readers may be submitted to the Research Council for listing in this column.

LEGISLATIVE NOTES—Office of Legislation, Dept. of Health, Education and Welfare, Washington, D.C. 20202

RECENT PUBLICATIONS ON GOVERNMENTAL PROBLEMS, compiled weekly by the Joint Reference Library, 1313 East 60th Street, Chicago, Ill. 60637

EDUCATION U.S.A., A special weekly report of Educational affairs, National School Public Relations Association, 1201 16th Street, N.W., Washington, D.C. 20036

URBAN REPORTER, published monthly by the Division of Urban Services, National Education Association, 1201 16th St., N.W., Washington, D.C. 20036

AVA WASHINGTON LETTER, American Vocational Association, Inc., 1025–15th St., N.W., Washington, D.C. 20005

COMPUTER BITS, News about computer education, published as a service to teachers by Educational Products, Fabri–Tek Inc.

EDUCATIONAL RESEARCHER, Official newsletter of the Am. Educational Research Assn., 1201—16th Street, N.W., Washington, D.C. 20036

HIGHLIGHTS, A monthly publication of the Bureau of Guidance of the New York State Education Dept. offering current information and references for counselors and other pupil personnel workers, Albany, New York 12224

NEWS, U.S. Dept. of Labor, Bureau of Statistics, 219 S. Dearborn Street, Chicago, Ill.

S.E.V.R. SYNOPSIS, a monthly newsletter prepared and published by the Detroit Special Education—Vocational Rehabilitation Project, 2918 Rivard, Detroit, Mich. 48207

GROUNDBREAKING SET FOR AERO MECHANICS HIGH SCHOOL IN DETROIT

Ground was broken at 3 p.m. Wednesday, November 9, for the new Aero Mechanics High School in Detroit.

The building, to be located on Erwin near Lynch Road—close to Detroit City Airport—will serve approximately 200 students. It will function as an off—campus laboratory of Kettering High School, providing specialized programs in the areas of airframe and power plant for 11th and 12th graders. It will cost about $700,000. The new Aero Mechanics will use the maximum ground area and consist of:

The multi-purpose hangar area for airframe and power plant, featuring a spray booth and room for 30 pupil stations. The main hangar has access from the airport side through a large hangar door, to bring in aircraft for work.

Specialized service areas for seven operations incidental to airframe and power plant instruction, with 40 pupil stations. Both the machine shop and the welding shop contain 30 pupil stations each. Above the service, testing, and repair shop area is a storage area enclosed with wire mesh partitions.

COMMITTEE ON RELATIONS WITH ORGANIZATIONS OTHER THAN SCHOOLS, CALIFORNIA JUNIOR COLLEGE ASSOCIATION

The Committee on Relations with Organizations Other Than Schools (CROOTS) was established by the California Junior College Assn. in 1966 as a constitutional committee of the Association. Current membership of this committee is as follows:

Norman E. Watson, Orange Coast Junior College District, Chairman.
Stanley E. McCaffrey, San Francisco Bay Area Council, World Trade Center.
Henry T. Gunderson, Electric Construction Company, San Jose.
F. Parker Wilber, President, Los Angeles Trade-Technical College.
Charles W. Patrick, President, San Diego Junior Colleges.
Robert J. Thompson, Chairman Business Division, Foothill College.
Eugene W. Smith, President Cogswell Polytechnical College, San Francisco.
Lanning L. Flint, Instructor, Electrical Technology & Mathematics, Bakersfield College.
Cecil G. Plummer, Board of Trustees, Yosemite Junior College District.
Donald G. Wren, Sociology Department, Fresno City College.
Leland P. Baldwin, Bureau of Business Education, Sacramento.

The general purpose of the committee is to serve as a liaison agency between business, industry, labor, government, the military and the junior colleges.

Areas to which the committee will address itself are:

1. Articulation of technical and occupational programs with business, industry and labor.
2. Promotion of good working relationships between education and the business community.
3. The development of a continuous and organized communications link between education and business and industry.
4. Serve as a clearing house for state-wide areas of concern between education and business and industry.

CROOTS is currently engaged in the following activities:

1. The compilation of a directory of state-wide organizations from the sphere of labor, management, professional and semi-professional associations with their education committees. This activity is being undertaken by the State Department of Education.
2. A subcommittee on apprenticeship education is being appointed to attack problems of coordination in apprenticeship education and to make recommendations for state-wide policy.
3. The development of a research proposal or updating the training of vocational education instructors. Dr. Thomas Merson and Mr. Ralph Boynton of the Bank of America are working on a tentative proposal with the hope of obtaining Federal funds for an organized program which would provide opportunities for vocational instructors to obtain a variety of experiences in modern techniques during the summer months.

4. The establishment of a joint non-profit foundation under the auspices of NCIEC, SCIEC and CJCA for the purpose of receiving equipment and materials and serving as a clearing house for equipment, materials and services for junior colleges statewide.

5. Counseling and guidance. Two programs were proposed in this area. One would involve job orientation for counselors in the form of business and/or plant tours during the summer months. The second would involve cooperation with NCIEC and SCIEC in developing a pool of community resource individuals who would be available to confer with students regarding occupational objectives.

6. Intern Fellowships for occupational and technical students. There was a proposal that a cooperative work-study program be initiated as soon as possible on a pilot basis to allow selected students who had completed the first year of a junior college occupational program to participate. It was suggested that students serve on a two-man team basis serving alternate semesters in business and industry, and in the classroom.

The Committee on Relations with Organizations Other Than Schools is committed to the objective of bringing about a closer identification of the junior colleges with the needs of business, industry and labor. Your suggestions and recommendations are sincerely welcomed and may be addressed to any member of the committee.

IEC California Work Experience Task Force

To: Evaluation and Planning Committee.
From: Work Experience Education Task Force.
Subject: Final Report.

The SCIEC Evaluation and Planning Committee initiated the Task Force in November, 1965, to develop a plan to encourage the expansion of Work Experience programs throughout the state because the conferees at the 1965 Arrowhead Conference had judged this program to be one of the most effective ways to properly motivate many of our young people.

The Task Force has held eight meetings since that time and presented its plan at a Work Shop at the 1966 Arrowhead Conference for critical analysis. The Work Shop discussion reached general agreement with the plan as outlined with minor changes in the written material. This letter, and its attachments, consist of the Task Force Committee's final report.

Our recommended plan is to offer a program to industry through all local Industry-Education Councils. Individual companies will be encouraged to use the Work Experience Education program as a means of training and employment of entry workers. SCIEC will provide the local Councils with a working kit which will consist of three items of information on the program: (1) a mail-out leaflet for each Council to mail to selected companies in its area; (2) a brochure describing the Work Experience Education program (a draft of this brochure is attached as a part of this report); and (3) a bibliography and partial supply of supporting "Work Experience" literature.

As a part of putting the plan into effect, the following suggestions are submitted:

1. That Mr. Chaffee address a letter to all local Councils recommending that they consider this plan and attaching a copy of this final report.
2. That preliminary indoctrination of Councils be made concurrent with SCIEC board meetings.
3. Selected Task Force members will be pleased to participate in this indoctrination either at the board meetings or at meetings with local Councils.
4. That the mailer be handled as follows:
   a. SCIEC office will print sufficient mailers for Southern California.
   b. Mailing procedure will be made available to the local Councils. Space will be left on the front of mailer (postcard section) for the name and address of the local Council office.
   c. School districts will be made aware of the program before the mailer goes out. This will be accomplished by meetings to explain the program to them and adapt it to their requirements.
   d. Art work on the mailer will be made available to the Northern California Industry-Education Council after the SCIEC letter has been prepared.

It is recommended that the plan and suggestions discussed above be approved by the Evaluation and Planning Committee and that it request SCIEC board approval for initiation of the program.

This program has been coordinated with the Northern California Industry-Education Council by Milan Wight who served on the Task Force.

WORK EXPERIENCE EDUCATION TASK FORCE.

cc: Evaluation and Planning Committee Members
Task Force Committee Members

Work Experience Education Task Force Members:

- Charles B. Roen, Chairman (Vice President, Project Development—Holmes & Narver, Inc.)
- Dwayne L. Brubaker (Supervisor—Los Angeles City Schools)
- N. P. Carmichael (Senior Labor Relations Representative—So. California Edison Co.)
- Hugh M. Sterling (Coordinator, Industry-Education Programs—Los Angeles County Schools)
- Milan Wight, Northern California IEC Representative (President, California Association of Work Experience Education)
- W. J. McCann, Secretary (Executive Vice President—SCIEC)
- H. P. Shawless, ex officio (Public Relations Department—Union Oil Co. of California)

SOUTHERN CALIFORNIA INDUSTRY-EDUCATION COUNCIL

Los Angeles, Calif., August 17, 1966.

DEAR SIR: The Southern California Industry-Education Council has, as its primary purpose, the motivation of young people to utilize their talents effectively in their occupations. In the course of evaluating the various programs which our Councils have initiated and carried out in this effort, the 1965 Arrowhead Conference judged the Work Experience Education program to be one of the most effective ways to properly motivate our young people.

We strongly recommend that each local Council consider putting the attached plan into effect to increase industry participation in the Work Experience Education program.

Sincerely,

EVERETT B. CHAFFEE, *President.*

(Suggested letter to be signed by Chaffee.)
Enclouse:

THE PROFIT MOTIVE IN WORK EXPERIENCE EDUCATION

MOTIVATED EMPLOYEES

The Work Experience Education Program in California deserves the full support of industry and business. This program has a great potential to properly motivate the youth of our community to be effective adults in the business world. This endorsement of the program recommends that all industry-education groups support Work Experience Education in their communities by providing proper work situations and encouraging effective programs in their local school systems, and that business profit by effective utilization of the program.

Industry and business frequently experience considerable pressure to block the employment of minors. Most of the obstacles to the employment of these youngsters—union contracts, compensation insurance, classroom schedules—have been solved. Much of the current social unrest stems from neglect of the immediate needs of youth between 16 and 25 who constitute an important segment of our population. If we can help to focus the energies of these youngsters into the proper channels through Work Experience Education, it will be a major gain to our community. Young people are our most important responsibility. Youth strongly desires to understand business and industry. If we can motivate them to a productive part of our economic life, the community will gain in every respect and all participating businesses will gain effective employees.

We encourage you—management—to take a positive action with your company policies and practices to permit direct support of the Work Experience Education program in your area It is in the best interest of the community to prepare youth for work responsibilities and it is your short and long-range interest to assure your company a motivated, trained labor supply. The attached material will assist you in understanding Work Experience Education and in evaluating the potential of youth employment, training, and career exploration to your company.

WORK EXPERIENCE EDUCATION

Work Experience was endorsed at the 1965 Annual Arrowhead Conference of the Southern California Industry-Education Council as the program with the greatest potential to motivate many young people to become productive, responsible members of their communities. The Planning and Evaluation Committee of the Southern California Industry-Education Council was given the responsibility to develop a plan to support and expand the Work Experience Education program in California.

1. Purpose of Work Experience—One of the major goals of education in this century has been the incorporation of occupational education into the school program without diluting the academic program. Work Experience Education is a program tailored to the individual student to give him (or her) an opportunity to engage in direct employment or receive occupational experience during an assigned part of the school day.

2. Types of work experience programs:

A. *Vocational Work Experience Education* is intended to provide part-time, supervised employment in real jobs definitely related to the school course and occupational goal of the student. In vocational Work Experience Education programs, the employment of a student is specifically within the occupation for which his courses in school are preparing him, the employment thus serving the function of a practical laboratory for reinforcing the in-school occupational education. Students in vocational work experience education receive both pay and school credit for their work.

B. *General Work Experience Education* is intended to provide part-time, supervised employment which will assist students to acquire desirable work habits, attitudes, and occupational information in real jobs. The job need not be definitely related to the occupational goal of the student. The primary purpose of general Work Experience Education is to give teenage boys or girls maturing experiences through supervised part-time employment that will help them to become productive and responsible individuals. Students in general Work Experience Education receive both pay and school credit for their work.

C. *Exploratory Work Experience Education* is essentially a guidance program. An enrolled student is given an opportunity both to observe and to participate in a variety of activities. The student receives no pay but earns school credit. Close supervision is provided by the school to insure that students are properly trained and do not replace paid employees.

THE VALUE OF WORK EXPERIENCE TO INDUSTRY—BENEFITS TO THE EMPLOYER AND COMMUNITY

Work Experience is a practical activity in the production or distribution of services or goods, carried on under normal working conditions, in commerce, business, industry, and in professional or institutional fields. It is intended to further civic or occupational competence in youth. Work-Experience Education is valuable to the employer because it:

1. Provides the employer with carefully selected, part-time trainees who may become permanent employees.
2. Provides an opportunity for the employer to train possible future employees by use of the methods that he has found to be most satisfactory for his operation.
3. Provides the employer with employees who are receiving additional training through related instruction at school.
4. Provides a training program for prospective employees for businesses or industries that are unable to conduct extensive training programs within their own establishments.
5. Reduces turnover and employment expenses by providing better adjusted employees when trained student employees accept full-time employment.
6. Provides industry with a source of workers more thoroughly trained than graduates who have not had work experience.
7. Increases understanding and better relationships between industry and school.
8. Provides the employer with motivated young people who understand the value of work accomplishment.
9. Helps assure a stable work force for industry by increasing the probability that the student will remain in the local community because he has found a place in its economic life.
10. Increases the availability of a trained labor force.

HOW COMPANIES CAN PARTICIPATE

1. A company considering a Work Experience Education program should first check with the local school district to see if such a program is in operation.

A. If the local school district does offer Work Experience Education, then company representatives should:

(1) Contact the school district's director of the program. The County Superintendent of Schools' Office can indicate the local contact.

(2) Contact local Industry-Education Council to assist in a program with the local school system.

(3) Decide in which types of programs the company wishes to participate.

(4) Arrange details for positions to be filled by student workers, their dates and hours of employment, etc.

(5) Learn the procedures for selection and referral of trainees from the school to the employer.

(6) Agree on procedures for student supervision and on-the-job follow-up by school personnel.

B. If the school district does not offer Work Experience Education, then the company representatives should:

(1) Contact local Industry-Education Council to assist in the organization of a program in the local school system.

(2) Contact the school district Superintendent or his designated representative to learn how a program can be established.

(3) Assist school personnel in becoming familiar with successful programs in other districts.

(4) Establish an experimental or pilot program with the local school district.

2. A company that is interested in expanding its Work Experience program on an area-wide basis can best develop and conduct a corporative level Pilot Program for evaluation. It would then be prepared to recommend methods, procedures, and processes to expand Work Experience on a division or area basis with the various school districts it may encounter throughout its system.

3. To evaluate which programs are best for your company, an example of each type is provided.

A. *Vocational Work Experience Education.*—A machine shop owner has found that one of the best ways to recruit and train skilled employees is through the vocational Work Experience Education program. He employs four boys annually who have completed industrial education courses in metal shop. With this background and on-the-job training in vocational Work Experience Education, the student graduates from high school skilled enough to be a valuable asset on the shop payroll. Students employed in this shop are on a 4–4 schoolwork program. Two full-time employees in this shop are former vocational Work Experience Education trainees.

B. *General Work Experience Education.*—The West Coast office of a large insurance company provides employment and training stations for thirty to fifty high school students each semester. Most of these trainees are hired on a 4–4 Work Experience program. (Four hours a day in classes and four hours per day on a paid job.) The student workers are employed by this company in several different job classifications. The largest number are employed as general office clerks, while other classifications are file clerks, record clerks, stock clerks, supply clerks, and typists. Some of these students, particularly the typists, are really vocational Work Experience enrollees because they are business education majors in high school. However, most of the students are in a general Work Experience program because they have academic or general majors in school.

This company has found many job stations that can be advantageously filled by part-time employees. The students who are hired get an excellent "preview" of employment opportunities in the insurance business. A study, conducted by this company several years ago, showed that seventy-five per cent of the high school seniors on the Work Experience Education program remained as full-time employees after graduation.

C. *Exploratory Work Experience Education.*—A major aircraft manufacturing company cooperates with school personnel by providing training stations for pupils from three high schools in two different school districts. Each school sends 10 to 15 Work Experience enrollees to the aircraft plant for two and one-half hours each day. Pupils selected for this program are of average ability and can profit by observing and participating in a work experience. As required in a non-paid, exploratory program, these students have a variety of experiences on the job. They do not remain at any single training station for more than two weeks. Girls on the program move through assignments in the personnel office, the tool engineering files, mail services, communications, and the engineering library. Boys have learning experiences in machine tool fabrication, the template shop, the pattern shop, form tools and dies, standard tool storage, tool and fabrication dispatch, and electrical sub-assembly. Upon completion of their exploratory work experience in this plant, pupils have new motivation for completing chosen educational objectives and more clearly see opportunities for themselves in the future. Plant personnel are enthusiastic about working with the young trainees.

ANSWERS TO SOME OF INDUSTRY'S QUESTIONS ABOUT WORK EXPERIENCE EDUCATION—LABOR LAWS AND REGULATION AND "WORK EXPERIENCE"

1. How many hours per day may a pupil spend on the job?

A. The total number of hours spent in school and/or the job may not exceed 8 hours per day for minors under 18 years old. Most pupils enrolled in Work Experience Education spend 3 or 4 hours each day on the job because they are in school 4 or 5 hours per day. Most high schools would have great difficulty in assigning pupils to work in the morning and to classroom courses in the afternoon because typically there are four classes offered in the forenoon and only two in the afternoon. Thus, a student who works in the forenoon could not obtain all of his required courses after he returns to the school campus. A few schools with extended or split schedules may be able to operate work programs both in the morning and afternoon.

2. What kind of jobs are prohibited for minors due to Child Labor Laws?

A. At 16 years of age young people may be employed in any occupation not declared hazardous by the United States Department of Labor. There are comparatively few of these hazardous occupations specified in the Fair Labor Standards Act. Boys under 16 and girls under 18 may not be employed by companies under government contract except in office occupations. Minors under 16 may not operate power-driven machinery and may not perform duties in any workroom where goods are manufactured or processed for interstate commerce.

3. What is the minimum wage for students working for employers on a Work Experience Education program?

A. Unless the pupil is enrolled in an approved non-paid Exploratory Work Experience project, all employees must be paid at least the standard Federal minimum wage or the California minimum wage for women and minors. Companies in interstate commerce must pay all employees at least $1.25 per hour. Employers not engaged in interstate commerce must meet the California minimum for women and minors of $1.30 per hour, except that an employer may employ not over 10% of his employees at $1.05 per hour if each person employed at this reduced rate is under 18 years of age. Actually, the California employer engaged in interstate commerce must also meet the $1.30 California minimum wage. The only difference is that he cannot pay less than $1.25 even for the 10% of his employees who may be under 18 years old.

4. What about Workmen's Compensation Insurance for pupils enrolled in Work Experience Education?

A. School districts are required by law to carry Workmen's Compensation Insurance for pupils enrolled in non-paid Exploratory Work Experience Education. Employers are required to carry Workmen's Compensation Insurance for pupils who are employed part-time and are paid for their services. There are differences of opinion on premium costs for compensation insurance covering Work Experience students. Some employers insist that their compensation insurance premium rates are increased because of hiring minors. However, reputable insurance executives have stated that compensation premium rates are not affected by the ages of the covered employees, but are determined only by the past accident record of the employees in the covered firm. Further investigation is under way on this subject.

5. What are labor unions' reactions to Work Experience Education?

A. In the history of labor unions is the success of many joint labor industry apprentice trade promotion programs and councils in safety and training. Once business and union leaders are acquainted with this program, there should be willing cooperation by both parties to further economic education of the student.

6. How do full-time employees react to student workers?

A. Regular employees are often skeptical at first because of stereotyped images of teenagers in modern society. However, most frequently after working with the youngsters and observing their eagerness to learn about the jobs, the regular employees become enthusiastic about having the youngsters working with them and learning from them.

B. The key to the success of this program in industry is that all of the supervisors and teachers involved should understand the student's position in the Work Experience program and the purpose of the program. First, that it is a project designed to provide students with practical work experience in industry, and it is a part of an educational program that will motivate them to achieve. It encourages people to remain in school and to prepare themselves for a greater future. It is believed that the majority of adult workers will receive this program and assist in its implementation once they understand its purpose.

7. What corporate policies sometime interfere with employment of student workers?

A. (1) The requirement that all employees be high school graduates; (2) A policy stating that all employees be over 18 years of age; (3) Regulations against part-time workers; (4) Unwillingness to be bothered with required work permits for minors; and (5) Misunderstanding of child labor laws. (Hardly a corporate policy, but a real problem.)

All of the above, often existing policies, can be changed if management is "sold" on the values of Work Experience Education. In the case of the Exploratory Program in which the company assumes no financial responsibility for the student, this type of program can be carried on without too many particular problems of union relationships, rules, compensation laws, and so forth.

8. What are the advantages of Work Experience programs to small businesses?

A. Small businesses have participated with school districts in Work Experience programs because they have immediate need for capable part-time employees and the supervision which the schools provide for Work Experience student-employees. Many small companies state that "entry" employees could not be trained by the company because of lack of supervisory time were it not for the services offered by the school district. Small business and industry are often flexible in employment policy and able to move rapidly to cooperate with school districts in Work Experience. Evaluations by these companies indicate that the superior employees developed through cooperation with the schools increased profits.

9. What are the advantages of Work Experience programs to large businesses?

A. Large business and industry have a great potential for utilization of the benefits of Work Experience because of the variety of job opportunities and the geographic dispersion of job stations. Despite difficulties of company-wide employment policies drawn up without consideration of Work Experience possibilities and problems of working with more than one school district, large corporations realize the value of being able to select the best original entry employees from a pool of workers already trained in a part-time program by the company with the aid of the school. Costs of recruitment of workers from Work Experience students as they graduate from school and costs of subsequent training of such workers are below average recruitment cost.

KINDS OF JOBS HELD BY WORK EXPERIENCE EDUCATION STUDENTS

Using classifications similar to those used in the *Dictionary of Occupational Titles*, the Work Experience students, in one large school district during a typical year, were working in the following occupational fields:

Occupational field	Approximate percent	
	Boys	Girls
Professional-technical	1	3
Clerical	12	44
Sales	6	18
Service (not domestic)	28	21
Domestic	0	6
Farm-agricultural	3	0
Skilled workers	2	0
Semiskilled workers	25	4
Unskilled workers	23	4
Total	100	100

During the school year, students worked on about 350 different kinds of jobs within the above major classifications.

The jobs in which the largest numbers of students were employed were:

Boys

Accounting Clerk
Apprentice Clerk
Assembler
Auto Mechanic's Helper
Auto Service Station Attendant
Box Boy
Building Custodian
Bus Boy
Cabinetmaker
Carpenter
Computer Programmer
Cook or Cook's Helper
Delivery Boy
Dishwasher
Electric Appliance Service
Electronics Mechanic
Engineering Aid
Gardener or Gardener's Helper
Kitchen Helper
Laborer, Construction
Machinist Trainee-Helper
Media Technician
Nurseryman
Office Boy
Packer
Police Cadet
Porter
Pressman, Offset
Retail Salesman
Salesman-Driver
Secretary, Med-Tech
Shipping Clerk
Stock Boy
Technical Typist
Welder

Girls

Beauty Operator—Trainee
Calculating Mach. Oper.
Cashier
Clerk, General Office
Clerk, Typist
Countergirl—Restaurant
Dentist's Assistant
File Clerk
Food Service Assistant
Grocery Checker
Homemaker's Assistant
Legal Secretary
Library Assistant
Marker—Cleaners
Nurse's Aid
Nursing Service Cadet
Page, Library
Receptionist
Salesgirl
Secretary
Shipping & Receiving Clerk
Telephone Operator
Typist
Waitress
Wrapper

Unusual jobs which have been done by Work Experience students include:

Boys

Aircraft Mechanic Helper
Boat Builder Helper
Coil Machine Operator
Dental Technician Apprentice
Frameman—Telephone
Gunsmith Apprentice
Heel Seat Laster (Shoes)
Marble Setter Helper
Sign Writer, Hand
Ski Maker, Machine
Swimming Pool Technician
Tailor
Termite Treater Helper
Travel Agent Assistant

Girls

Adjustment Clerk
Credit Clerk
Display Girl
Draftsman, Junior
Embossing Machine Operator
Fishing Rod Assembler
Gym Instructor
Horse Trainer
Mandrel-Maker Helper
Pointer, Hand—Porcelain
Payroll Clerk
Wig Dresser

BIBLIOGRAPHY AND RESOURCES

1. "Handbook on Work Experience Education," California State Department of Education, Superintendent of Public Instruction. Sacramento, Calif.

2. "A Guide Work Experience Education and Employment Placement Program," Los Angeles City Schools; Administrative Offices: 450 North Grand Avenue, Los Angeles, Calif.; Mailing Address: Box 3307, Terminal Annex, Los Angeles, Calif. 90054.

3. "Annual Report—1963-64 School Year Work Experience Education," Los Angeles City Schools, Division of Secondary Education, Work Experience and Continuation Education Section, 1200 Cornwell Street, Room 104, Los Angeles, Calif. 90033.

I

4. California Association of Work Experience Education (Reports).

5. Southern California Industry-Education Council, General Information Source, 700 State Drive, Exposition Park, Los Angeles, Calif. 90037.

6. (Future—Selected Work Experience Programs).

"Recognizing that corporate philosophy varies from company to company, educators and industry leaders have developed a program designed to meet your company's policies with:

AVAILABLE PROGRAMS GEARED TO INDUSTRY

1. *Vocation work experience education.*—Students' employment is specifically within the occupations for which school courses are preparing them. Students receive both pay and school credit for their work, and all work experience will be supervised. Employment is on a part-time basis. Released time from school will be arranged.

2. *General work experience education.*—A specific job which need not be related to specific school training or vocational goals.

Part-time supervised employment. Released time from school will be arranged. Students receive pay and school credit for supervised work.

3. *Exploratory work experience education.*—Essentially a program to provide students a first-hand knowledge of job requirements to determine their suitability for a particular occupation. It is not intended that students replace a regular employee. Students receive school credit but no pay."

MINUTES OF BOARD OF DIRECTORS MEETING, DECEMBER 20, 1966

A meeting of the Board of Directors of the Southern California Industry-Education Council was held on December 20, 1966, at the Los Angeles Chamber of Commerce, starting at 12:00 Noon.

Present: Charles F. Horne, Chairman, Hon. Ruth Bard, C. H. Braithwaite, James A. Campbell, Dr. Everett B. Chaffee, D. A. Clarke, H. Reeve Darling, J. H. Davis, Walter Dundon, Don Flamm (John Lawson), Russell Furse, Dr. Adrian Gentry, L. J. Gere, Milton Hoffman, Harlan Holmwood, Ronald Hunt, Dave Hurford, Dr. Robert Jenkins, Bernard F. Kamins, Arthur E. Mann, William J. McCann, T. M. McDaniel, Jr., Maurine Moore, Robert O'Donnell, Robert S. Putnam, David Randolph, J. E. Roggeveen, J. Gerald Ross (Dr. Gilbert Brown), Rollin M. Russell, John N. Shellabarger, M. E. Spicer, Reed Sprinkel, Hugh Sterling, Austin Strong, Dr. Jacob W. Stuzman, Oscar Trippet, Donald Tull, Peter Ulrich, T. Stanley Warburton, Herman E. Ward, Rex Wignall, Mary Alice Wittenberg, and Robert V. Woodworth.

I. APPROVAL OF MINUTES OF MEETING OF SEPTEMBER 20, 1966

It was moved, seconded, and carried that the minutes of the meeting of September 20, 1966, be approved.

II. REPORT ON WORK EXPERIENCE EDUCATION—HUGH STERLING

Hugh Sterling, Coordinator of Industry-Education Programs of the Los Angeles County Schools, reported that the 1967 program will start February 15 and will be implemented through the local Industry-Education Councils, county school superintendents, and the educators having the responsibility of work experience education.

Mr. Sterling pointed out that the Work Experience Education Program in California deserves full support from business and industry. The program has a great potential to properly motivate the youth of our community to become adults who are effective in the business world. All industry-education groups should support Work Experience Education in their communities, providing proper work situations and encouraging effective programs in their local schools, and thus ensuring that business will profit by effective utilization of the program.

III. REPORTS OF COUNTY COUNCILS

Los Angeles County Industry-Education Council—J. H. Davis

The Vocational Education Program of the Council will be kicked off by the California Task Force on Work Experience Education, and it is expected to be a valuable aid in the motivation of students specializing in vocational education.

An Insurance Award Pilot Program undertaken by the Independent Insurance Agents Association under the leadership of Hayward Andrews, President of the association, is under way. Mr. Davis stated the Los Angeles County Schools are processing authorization of a letter to be mailed relative to the program. A special kit on the program has been prepared for the use of the teachers.

The Science U.S.A. Program is being evaluated and decision will be made later concerning its continuance as a project sponsored by the Los Angeles County IEC.

The Medalist Award Program was successfully held October 26th, and awards presented to 145 students who had achieved to the best of their ability in science. A special feature of the program was a demonstration of the NASA Spacemobile. Special commendation was expressed to Hugh Sterling and Sister M. Clarice, who acted as chairmen of the evening. Members of PIRA (Personnel and Industrial Relations Association) also assisted.

New IEC Council—J. H. Davis

Mr. Davis reported on the formation of the new San Fernando Valley IEC, which has held its initial meeting. Mr. Joseph Staller, manager of the West San Fernando Valley Division of the Southern California Gas Company, was appointed chairman pro tem. Mr. R. B. Phillips of the Pacific Telephone Company, Pasadena North Area, is coordinating until election of officers.

Orange County IEC—Francis Laird

Fair Enterprise Medallion Contest.—Eighty-one students from 25 public schools and 2 parochial schools were given an economic test at California State College at Fullerton by Dr. Norman Townshend-Zellner and three of his professors. Six members of OCIEC assisted. Three teachers accompanied the students. One winner from each school will be recognized by presentation of a medal at Orange County's Annual Management Conference, and the over-all winner will be given a $100 Savings Bond.

Annual Orange County Science Fair.—Planning is well along for the annual fair to be held in Cook Gym at Santa Ana College. Interest is high. A Science Fair News Sheet will be sent to all school people. The SCIEC Film of the Science Fair held in Los Angeles is being widely shown in Orange County through the County Film Library.

Annual Counselor Workshops.—The jointly sponsored Counselor Workshops were held again in November. There were three days of workshops attended by approximately 300 counselors going to 18 companies. It is felt they were very worthwhile.

Teacher-For-A-Day.—Several companies furnished speakers to relieve teachers so that they could attend the Biology Conference in San Diego.

Gifts to Schools.—Two or three OCIEC member companies have made substantial gifts of equipment to Orange County Schools. Notable is the Hughes gift of a $6,000 Planetarium to Fullerton Junior College.

Teachers' Workshops.—Autonetics again held a three-day workshop for teachers and counselors the week after school was out. Plans are for another workshop in June of 1967. About 50 teachers took part.

Upward Bound Program.—Several OCIEC companies have taken part in the federal project called Upward Bound held at CSCF. Plant tours were arranged for the students in the project and several companies had representatives on the advisory board.

Work With Handicapped Students.—Several companies gave talks to classes of handicapped students and arranged for plant tours. The purpose was to encourage these students to prepare themselves for meaningful employment.

Metropolitan Santa Barbara IEC—Russell Furse

President Russell Furse reported a dinner meeting was held on October 13th at the El Mirasol Hotel, at which the members of the Council decided to initiate four projects during the coming year and appointed co-chairmen to implement the programs, as follows: Support of "Career Opportunity Employment Day" of Santa Barbara City College; "Economics of American Industry" with emphasis on curriculum for secondary schools; Industry-Education Symposia; Re-evaluation of the Vocational High School.

Progress on these programs will be reported at the next meeting of the Board of Directors of SCIEC.

Northern Santa Barbara IEC—Walter Dundon

Mr. Dundon reported the Council decided at a recent meeting to continue all existing programs, with emphasis on: Teacher-For-A-Day; Work Experience Education; Fair Enterprise Medallion Award; and new Military Program.

Implementation of these programs will be reported at the next Board meeting.

San Bernardino/Riverside IEC—Dr. Adrian Gentry

Dr. Gentry reported officers for the coming year would be installed at the *Annual Dinner Meeting* at Chaffey College on January 24. The new officers are: President, Captain Edward B. Jarman, Commander, U.S. Naval Laboratory, Corona; Vice President, Glen M. Larsen, Coordinator of Vocational Education for San Bernardino County Schools; Treasurer, Dr. Joseph K. Thomas, California State College at San Bernardino; Secretary, Mrs. Dorothy Bumiller, San Bernardino Valley College. Speaker for the dinner will be Dr. Ivan Hinderaker, Chancellor of UCR.

The 11th Annual Inland Science Fair will be held the last week of March at the Orange Show Grounds in San Bernardino, with 400 exhibits expected.

The Annual Meeting to Honor Outstanding Teachers and Pupils is to be held at the University of Redlands in April or May, and another Industry-Education Workshop is scheduled during the summer months, also at the University of Redlands.

In the field of *Vocational Education*, the major activities are in the area of work experience education to assist the vocational teachers to find work experience for their students while still enrolled in school. Every one of the 22 high schools in San Bernardino has initiated a work experience education program.

San Diego IEC

No formal report was made on the activities of the San Diego County IEC. Announcement was made of the Annual Meeting to be held January 31, 1967, at the Town & Country Hotel in Mission Valley, starting at 7:30 a.m. and adjourning at 10:00 a.m. All members of the Board of Directors were invited to attend.

Ventura County IEC—Maurine Moore

Annual Science Fair.—Maurine Moore, Consultant for Ventura County Schools, announced the date of the Science Fair as April 28, 1967.

Ventura County Career Planning Center.—This will be held February 16–21 in the Home Economics Building at the Ventura County Fair Grounds, Seaside Park. It is a gathering together under one roof of the personnel and materials necessary to help young people to understand the opportunities available to them, and is designed to encourage young people to inquire about, investigate, and begin to plan for the careers that are possible in Ventura County.

Science Club.—The Ventura IEC is also forming a new Science Club under the leadership of Bill Brisby.

IV. SALUTE TO EDUCATION BANQUET—T. M. MCDANIEL, JR.

Chairman McDaniel announced the plans for the Banquet and stated that, although the speaker originally arranged for had cancelled out, SCIEC was fortunate to secure the services of Dr. Paul A. Miller, Assistant Secretary for Education of the United States Department of Health, Education, and Welfare.

Mr. McDaniel encouraged all members of the Board to assist in making the Banquet a success.

V. COMMUNITY INFORMATION—WAYNE BURNETTE FOR T. ALLEN LYNCH

Mr. Burnette stated the Community Information Committee would publicize during 1967 the California Science Fair; the Arrowhead Conference; Science

U.S.A.; the Civic Seminar; the Salute to Education Banquet; the Superintendent's Luncheon; and the Special "Motivation" Symposium.

Mr. Burnette further stated the committee would encourage the member corporations to assume the publicity for such programs as Teacher-For-A-Day, Fair Enterprise Medallion, etc.

Mention was made that the Pacific Telephone Company is reviewing with school personnel all their science material. Mr. Burnette pointed out that the Telephone Company has made available a brochure entitled "We The People", and that Pacific Telephone and General Telephone have collectively instituted a number of programs in addition to donating obsolete equipment to the school "Head Start" Program.

SCIEC Film.—Mr. Burnette reported the proposed film telling the story of SCIEC has been formulated by Messrs. McCann and Lynch and will be made available during 1967.

VI. SECRETARIAL MANAGEMENT TASK FORCE—MARY ALICE WITTENBERG

Mary Alice Wittenberg, former President of the Business Education Association, submitted on behalf of the Evaluation and Planning Committee the Secretarial Management Task Force recommendations and format. (Att. #1.) It was noted that President-Elect Sullivan would appoint a chairman to implement this task force study.

VII. SCOPE PROGRESS REPORT—RONALD HUNT

Mr. Hunt, Associate Secretary of the State Committee on Public Education (SCOPE), reported on the progress of the organization, which was formed in April of 1966 by the State Board of Educators to investigate the conditions and needs of the educational enterprise and to set up a permanent system of education inquiry for the State of California. The committee is composed of 25 distinguished persons nominated by the State Board and invited by the Governor, and is representative of a cross-section of the citizenry of the state, both geographically and by interest.

SCOPE will also, in conjunction with the Board of Education and the legislators, take a long-range look at the problems of education in the state, emphasizing the needs of the elementary and secondary fields to data gathering. The latter will involve a thoughtful report of all areas of interest, with in-depth interviews with educators, scholars, industrialists, and community leaders. Mr. Hunt stated the interviews to date reflect the importance of the efforts of industry-education councils and a charge of further responsibility and opportunity to the educators by this leadership.

VIII. PRESIDENT'S REPORT—DR. EVERETT B. CHAFFEE

Research Council Great Cities Program for School Improvement.—Dr. Chaffee reported on the work done to date by this organization, which has undertaken studies for metropolitan areas and school tax districts of the 16 larger cities in the country on vocational education and instructional material, the aim being to develop more adequate programs to meet the needs of the metropolitan schools.

After discussion it was concluded by the Board that this organization can be effective only if local communities make the determination, and basically the SCIEC Executive Committee should follow this direction and participate on the basis of an exchange of available knowledge from one region to another.

Joint meeting NCIEC–SCIEC

The Joint Meeting of NCIEC–SCIEC was held on December 9 in San Francisco. (Minutes Att. #2.) Of concern is the request of the Committee on Relations with Organizations Other Than Schools (CROOTS) of the California Junior College Association that SCIEC cooperate in their proposed projects: intern fellowships for occupational students and summer workshops for teachers. It was felt by the Board of Directors, in view of the intern fellowship program having been launched by NCIEC with four industries, SCIEC should await the evaluation of the program before implementing a similar one in Southern California.

Regarding circulation of surplus material, it has been indicated that descriptions of the material are inadequate and further study will be needed by CJCA before the program can become practicable.

Civic seminar

This was one of the most successful events of the year 1966. Summary is attached to these Minutes. (Att. #3.)

Teacher-For-A-Day

President Chaffee commented that a fine job was done by Ernest Loebbecke of the Title Insurance & Trust Company, and his associate, John Crowley.

It was noted this program has been referred to the Evaluation and Planning Committee to be certain that in the future the program is coordinated by the local district superintendents or the local county superintendents.

In 1967 the idea of Teacher-For-A-Day may be utilized by using different terminology, and with consideration of the teacher being in the classroom.

Evaluation and planning committee

Dr. Chaffee commended the fine job done, under the chairmanship of H. P. Shawlee of Union Oil Company, by the Evaluation and Planning Committee, which has the responsibility of recommending to the Council the specific projects or programs to be undertaken, specific examples being the Work Experience Education Task Force, the SCIEC Calendar, the Secretarial Management Task Force.

Financial plans

Financial plans for the 1967 year include: a symposium; a theater party; special solicitation of non-members of SCIEC for sponsorship of the Science Fairs; individual memberships; normal program of up-dating contributions of present members; private foundation aid (not governmental); the Superintendents' Luncheon.

IX. SECRETARY'S REPORT—WILLIAM J. MCCANN

Teen Cuisine.—The Teen Cuisine Meal Management Fair will be held in Orange County this year. Plans are available for other counties if they wish to conduct such a program.

Junior College Study.—As discussed at several meetings of the Executive Committee, SCIEC will await the results of the Junior College Study that is being conducted in Northern California before implementing this general program in Southern California.

Surplus Material.—This has been supplied to Junior Colleges wherever requests have been specific. The Junior College Association has been advised to reevaluate the present list and to circulate it at a later date when the colleges can come forward with specific requests.

Christmas Lectures.—Under the chairmanship of Dave Randolph, Coordinator of Industry-Education Programs for Los Angeles City Schools, the Christmas Lectures conducted by the Association for the Advancement of Biomedical Education (AABE) were held at Bovard Auditorium at USC on the evening of December 19, 1966, and were very well attended by students from the entire county.

X. ELECTION OF OFFICERS

Arthur E. Mann presented for consideration the following slate of officers for the year 1967: Chairman of the Board, Charles F. Horne; President, Paul E. Sullivan; First Vice President, Dr. David H. Paynter; Second Vice President, Rollin M. Russell; Vice President of Finance, Austin Strong; Treasurer, Herman E. Ward; Vice President of Arrowhead Conference, H. P. Shawlee; Vice President Community Relations, Bernard F. Kamins; Vice President Evaluation and Planning, Charles B. Roen; Vice President, Science Fairs, Robert Putnam; Secretary, William J. McCann; Chairman Advisory Board, T. M. McDaniel, Jr.

The Chairman requested additional nominations from the floor and, hearing none, declared the nominations closed. It was moved, seconded, and carried that the slate as nominated be elected, and the confirming vote was unanimous.

XI. BUDGET—CHARLES F. HORNE

Chairman Horne presented the proposed Budget for 1967 (Att. #4.) After discussion it was moved, seconded, and carried that the budget as presented, in the amount of $54,240, be approved.

XII. OTHER BUSINESS

Chairman Horne presented a commendation to Jack Davis, who has resigned as a member of the Board of Directors. Former President of the Los Angeles County IEC, he was commended for his leadership in bringing industry and education together.

XIII. CLOSING COMMENTS—CHARLES F. HORNE

Mr. Horne brought up the problem of securing additional memberships, and urged all members to assist during the coming year in SCIEC's efforts to broaden the scope of operations.

Mr. Horne also requested that if possible some of the individual companies make available the services of a junior executive to the execution of some of SCIEC's programs, such as the Science Fairs, the Civic Seminar, the Fair Enterprise Medallion, etc. He pointed out that SCIEC would also welcome any secretarial, clerical, and reproduction assistance that can be rendered at the company facility by any member corporation.

There being no further business, the meeting adjourned at 1:40 p.m.

The next meeting will be held April 18, 1967.

Attachments:

#1—Secretarial Management Task Force Recommendations & Format.
#2—Minutes of Joint NCIEC–SCIEC.
#3—Summary of Civic Seminar.
#4—Proposed Budget for 1967.

SECRETARIAL OCCUPATIONS TASK FORCE

It is recommended that a Secretarial Occupations Task Force be appointed by the SCIEC President at the request of the Evaluation and Planning Committee.

The Task Force should make a study of present programs preparing for employment in the secretarial field and the programs of teacher preparation for this field.

This study should include, but not be limited to, the following:

1. Develop a comprehensive definition and undertanding of the secretarial occupations.
2. Identify duties and responsibilities:
    a. Required skills, standards, and attitudes for entry level jobs.
    b. Specialized requirements, such as medical, legal, and technical.
    c. Requirements for executive and administrative positions.
    d. Determine what kinds of general information about business students should have before entering employment.
3. Programs preparing for employment in secretarial occupations
    a. General secretarial programs.
    b. Specialized programs.
4. Evaluation of existing programs as related to occupational requirements.
5. Determine what kinds of information about industry and business teachers should have to keep programs geared to current demands.
    a. How can this be made available to teachers through work experience.
6. Determine what in-service and on-the-job training is available.
    Orientation for new employees.
    Preparation for promotional opportunities—in-service recognition of individual efforts such as college courses.
7. Develop a program to ensure the dissemination of occupational and promotional opportunities to encourage qualified people to enter the field.
8. Consider possibilities of developing secretarial interneships program at college level similar to management trainee program for qualified students.

MINUTES, NCI–EC AND SCI–EC LIAISON COMMITTEE MEETING, SAN FRANCISCO, DECEMBER 9, 1966

A meeting of the NCI–EC and the SCI–EC Liaison Committee was held Friday, December 9, 1966, at 2 p.m., Pacific Gas & Electric Company, 245 Market Street, San Francisco. Those present were:

From SCI–EC: Everett B. Chaffee, President (Associate Superintendent, Los Angeles Unified School District); Charles F. Horne, Jr., Chairman (President, General Dynamics/Pomona Division); William J. McCann, Executive Vice President.

From NCI–EC: M. J. Bloecher, Chairman, NCI–EC Liaison Committee (Coordinator, Educational Activities, Pacific Gas & Electric Company); J. Frederic Ching, President; John W. Detlor, Chairman, Conference Committee, (Supervisor, Training and Development, Southern Pacific Company); Rockwell Hereford, Executive Secretary; Donald P. Krotz, Vice President (Vice President, Chevron Research Company); Ivy Lee, Jr., Coordinator (Ivy Lee, Jr., & Associates); Henry Tyler, Director (Executive Secretary, California Junior College Association); Milan Wight, President, California Association of Work Experience Educators (Coordinator, Work Experience & Education, Mt. Diablo Unified School District).

At the invitation of the Committee, Kenneth A. Wood, Consultant in Pupil Personnel Services, Bureau of Junior College Education, California State Department of Education, was present.

Mr. Bloecher presided.

The following subjects were discussed and decisions reached as indicated:

1. California Civic Seminar. Two Civic Seminars have been held the past two years, both in Palm Desert. The basic program has been suggested by the California School Board Association, and the details of the program have been worked out by SCI–EC with the cooperation of the Conference Chairman. Because the California School Board is a statewide organization, SCI–EC has asked NCI–EC to join in general sponsorship. The suggestion was made that perhaps this Conference should be held alternately in the North and South. As plans have already been completed for October 1967 at Palm Desert, that Conference will be held there. To help members of NCI–EC arrive at a decision as to whether future Seminars should be alternated, Mr. McCann was asked to prepare and forward to Northern California by mid-January 1967, a summary of the details involved, costs, funds, etc., including specifications for covering same.

2. Mr. Tyler outlined four projects being developed by the California Junior College Association in cooperation with NCI–EC and SCI–EC through the CROOTS Committee this summer.

   a. A cooperative pilot work program on a statewide basis whereby students in Junior Colleges will work, as part of their Junior College education, in business organizations. Such students will require three years to complete their Junior College program rather than two. It is hoped that this program will get underway as of February 1. Some four or five companies with statewide operations are cooperating in the initial phase of this pilot project.

   b. Plans are underway for holding two summer workshops for counselors. Each will last approximately three weeks. One will be held in the North and one in the South.

   c. A survey is to be made among Junior Colleges on the economics being offered. He said a grant of approximately $10,000 for this project has been received.

   d. He referred to some information which has been developed by Junior Colleges of equipment that they could utilize if business organizations could make it available. Discussions indicated descriptions of the material are inadequate and the whole question needs further study before the program can be made practical.

In connection with the Junior College program it was recognized that while A. J. McNay on behalf of NCI–EC was coordinating the work with the Junior Colleges, he was doing so on behalf of both NCI–EC and SCI–EC.

3. In general it was concurred that in matters dealing with national or statewide organizations both NCI–EC and SCI–EC should collaborate their cooperation. From the practical point of view, whichever is located geographically in the area of the federal or statewide organization's headquarters should take the lead and be directly involved; in local or non-statewide groups, the local Councils should collaborate as they consider appropriate.

4. As far as solicitation of funds is concerned, it was agreed that each Council would solicit only from offices within their area; in other words, nation-wide or state organizations that have headquarters in Southern California or Northern California would be solicited for support only through their local representatives and not from the headquarters located outside their geographical areas. Should exceptions suggest themselves, before any direct solicitations, henceforth, will be made outside of the geographical areas involved, the approval of the home Council will be obtained, or such solicitation will not be made.

5. Admiral Horne reported that the State Chamber of Commerce had created an Education Committee and that he had been appointed chairman. This Committee will undoubtedly look for aid and assistance from both NCI–EC and SCI–EC and their respective members.

6. The three county Manpower Survey conducted by the California State Department of Employment in cooperation with the Central Coast Counties' Industry-Education Council, was reviewed. Mr. Lee reported that copies had been sent to all directors of NCI–EC, members of its Advisory Board and to a selected group of business leaders throughout Northern California. Additional copies were available upon request. Further, he indicated that Marc Johnson,

Coastal Area Manager, California Department of Employment, had indicated that similar surveys could be made in other areas provided they could be funded. The original survey was funded with Federal funds. A second survey, it is understood, is being conducted in Alameda County with funds provided by the Alameda County Board of Supervisors.

7. The question as to whether the name Industry-Education Council was misleading was reviewed. All concurred that bringing about an understanding of the work of the NCI–EC and the SCI–EC was an educational operation and that unless some unknown facts were developed there appeared to be no reason for changing the Councils' names.

8. Dr. Chaffee described the program being conducted by the San Diego Unified School District on behalf of the State Board of Education in reference to clarifying the California State Education Code. He indicated progress was being made and that a report would be shortly submitted which, in turn, would be considered by the State Legislature. The objective was to clarify while simplifying state educational requirements.

9. Mr. McCann described the Bio-medical programs conducted by SCI–EC, while Mr. Hereford made reference to the discussions held in Northern California by interested groups and he indicated the subject had been referred to the Alameda-Contra Costa Counties Affiliate for development. Mr. McCann agreed to submit details concerning their program as a guide for further development in Northern California.

10. Mr. Bloecher inquired whether any discussions had been held concerning an organization known as "Americans for Competitive Enterprise System," commonly referred to as "ACES." While Mr. Lee described ACES' operation as conducted in the East, no one was familiar with its operations in California. All concurred that the creation of new organizations should be discouraged, while at the same time should any ideas be considered desirable, they should be incorporated into the existing programs.

11. The Research Council of the Great Cities Program is seeking a Federal grant, and, if such is obtained, it will undoubtedly require close cooperation with Industry and NCI–EC and SCI–EC.

12. It was generally agreed that the exchanges taking place at this meeting were highly desirable, and it was suggested that similar meetings be held about twice each year so that each Council would be informed and their activities coordinated to the degree considered appropriate. The next meeting, which will probably be held in the Spring, will normally be held in Southern California.

The meeting adjourned at 4:30 p.m.

SOUTHERN CALIFORNIA INDUSTRY-EDUCATION COUNCIL, ACTUAL BUDGET 1962, 1963, 1964, 1965, 1966, PROPOSED BUDGET, 1967

	1962	1963	1964	1965	1966	Proposed 1967 budget
Salaries:						
Executive secretary/vice president	$10,075	$12,000	$12,500	$13,750	$15,000	$15,000
Secretarial and clerical	5,400	5,700	6,000	10,010	11,919	13,000
Total salaries	15,475	17,700	18,500	23,760	26,919	28,000
Office expense:						
Taxes	159	162	354	537	688	800
Rent, maintenance	155	240	240	220	723	1,200
Postage and freight	264	332	349	743	827	1,500
Telephone	648	965	1,166	1,727	1,711	2,500
Supplies	123	212	371	456	985	1,000
Total office expense	1,329	1,911	2,480	3,690	4,934	7,000
Council relations:						
Brochures-awards-photos	1,663	855	1,062	753	433	1,000
Programs-dinners-seminar-travel	906	2,180	2,387	3,393	1,287	3,240
Total council relations	2,569	3,035	3,449	4,146	1,720	4,240
Newsletter	117	174	888	1,486	336	2,100
Science fairs and programs	2,861	3,254	1,688	4,027	4,648	7,200
Interest	164	28	0	0	0	0
Miscellaneous dues, insurance, etc	108	158	280	265	443	500
Office equipment	0	0	686	0	0	[1] 1,200
Clerical assistance	0	0	0	0	0	4,000
National Academy of Science	0	0	0	0	0	0
1961 Science Fair Debt	0	2,360	0	0	0	0
Grand total	21,943	28,620	27,971	37,374	39,000	54,240

[1] Items needed: IBM typewriter, adding machine, copying machine (Thermofax or equivalent), approximate cost: $1,200.

SOUTHERN CALIFORNIA INDUSTRY-EDUCATION COUNCIL PROPOSED BUDGET—1967

INCREASE IN ITEMS

Rent, maintenance

This increase is due to an interpretation by the Business Manager of the California Museum of Science and Industry of a ruling of the Administrative Office of the State of California, to the effect that SCIEC must pay for all of the space that is considered to be utilized in its operation.

Postage and freight

This increase results from additional costs required to revise all mailing plates to conform with the postal requirements that all bulk mailings have the Zip Code.

Telephone

This increase results from a recommendation of the telephone company that service be increased. Also to a desire to communicate more systematically with all councils in Southern California.

Council relations

The amount proposed in the 1967 Budget is not an increase, but reflects the same monies as budgeted in 1966. Funds were not available in 1966 and thus there was a corresponding decrease in actual expenditure.

Newsletter

The Newsletter was curtailed in 1966. Re-establishment in 1967 is the reason for the increase.

Science fairs

The amount reflects the minimum necessary to realistically conduct the Los Angeles County Fair and the California Fair.

Clerical assistance

(Which could be on an interim basis in the form of administrative assistance.) This has been budgeted for the last three years, but funds have not been available.

Office equipment

Needed items are a Copying Machine, an IBM Typewriter, and an Adding Machine. (Footnoted on p. 386.)

Unaware programs exist—by area

Area 5—Los Angeles
  1. Chemical Progress Week
  2. Atomics Science Youth Day
  3. Community Career Conference
  4. Exploratory Science Laboratory Program
  5. Industry on Parade

Area 6—San Bernardino-Riverside Counties
  1. Women's Space Symposium
  2. Exploratory Science Laboratory Program
  3. Gifted Student Program
  4. Boys' Day in Industry
  5. Business & Industry Days

Area 7—San Diego-Imperial Counties
  1. Christmas Lectures
  2. Conference on the Atom
  3. Science Project Centers
  4. Women's Space Symposium
  5. Biomedical Education

Area 8—Orange County
  1. Boys and Girls in Industry
  2. Biomedical Education
  3. Women's Space Symposium
  4. Teacher Institutes
  5. Christmas Lectures

PROGRAMS—PRIORITY AND AID NEEDED

35% of Total Survey Response Selected These Ten Programs as Priorities and in Need of Immediate Aid

Total survey preference

1. Work Experience—Work-Study Program
2. Advisory Committees
3. Survey of Job Opportunities
4. Teaching Aids
5. Summer Employment for Teachers and Students
6. Science/Technical Library Plan
7. Audio-Visual Materials
8. Surplus Equipment
9. Industrial and Vocational Arts
10. Demonstration-Lecture Teams

Mr. McCANN. Briefly, what the Southern California Industry-Education Council is—separated north and south, it is all the resources of the major industries and a lot of the smaller industries making their resources available to education, bringing all these resources in aid to schools to acquaint them with the changing occupational requirements.

Basically, it is best described as a backstop for the schools, and as they have requests from industry, these resources will be supplied to the schools at no cost.

I hasten to preface the remarks that the council never gets involved in politics, regardless of the merits, nor does it become involved in the curriculum. We just respond to the educators.

As I mentioned, there is supplemental data here, and the reason I brought this is to acquaint you with what is being done and what is being planned next year. A good example relates to the career guidance center held in the Los Angeles area last week and in Ventura last month. This is where all the students are brought into one location sort of like a cafeteria of job availabilities to become acquainted with the job opportunities available.

We have recognition programs such as Science Fair. Plus 42-odd programs.

In the minutes of the April 5 meeting it reflects a program of recognition in the field of vocational education.

If you will excuse me a minute, I will show you one or two charts which you can look at while I am reading the other items for your information.

Basically, what we are moving into is a recognition program in vocational education. This is all being done supported by industry, again based on recommendations from the educators.

I encourage you, at your convenience, perhaps while flying back to Washington, to become acquainted with this article, "Should Every Youngster Go to College?" It is a reprint of a Parent magazine article.

(The article referred to follows:)

[Article from Parent's magazine, March 1967]

SHOULD EVERY YOUNGSTER GO TO COLLEGE?

(By James M. Lynch, Jr., Ph.D., Dean of Students, Glassboro State College, Glassboro, N.J.

"I want to leave school," Betsy Sanders, a soft-spoken, eighteen-year-old girl said to me. "I've made up my mind that I don't want to go to college."

I've heard that statement too many times to be surprised by it. What did surprise me was the timing. We were still in the formal-orientation period for freshmen, and classes hadn't even started yet.

I wondered what Betsy's trouble was. Was she homesick? Did she doubt her ability? The folder in front of me showed that Betsy had an above-average IQ, a fine high-school record, good college-board scores, and excellent recommendations from her teachers. When I asked her what the problem was, Betsy said right off that she hadn't ever really wanted to go to college. At first she hadn't given much thought to it one way or the other, taking it for granted that she would probably go to work after high school, maybe with some extra clerical or technical training. But since all her high-school marks were good, her parents and teachers felt she ought to try for college. She was persuaded to take the college boards, and when she scored well and was accepted by two schools, naturally she felt proud. At her parents' urging she chose our school which was within commuting distance of her home.

During the summer she took a job in a bank. "I liked it," she told me, "and after I was there a few weeks, my doubts about going to college in the fall returned. I kept wondering what was wrong with me, wanting to go to work. Then I kept telling myself it was too late. I couldn't change my mind because I didn't want to hurt my parents. They talked so proudly all the time about my going to college."

Betsy spent most of August worrying. She had nearly gotten up her courage to tell her parents that she didn't want to go to college in the fall when they mentioned that they had paid the first semester's fees, and then she was ashamed to say anything.

So she came to school, determined to see it through. She registered, bought her books, and attended all the freshman orientation meetings. The other kids seemed happy, and she felt more and more upset and out of it.

"When I got home yesterday," Betsy said, "I knew I couldn't stand it any longer. So I told my mother I didn't want to go back. She cried, but she told me that Daddy and she would try to understand. Last night, I had my first good night's sleep in two months."

I call kids like Betsy, drop-ins. They arrive at public and private four-year colleges every September, but they don't stay long. They hang around a few weeks, decide they want no part of college—and leave. Most of them are gone by Thanksgiving; a few finish out the first semester, having cut classes, and hung around the snack bars and lounges. They don't get into any student activities. If they're residents, they can't wait until that last class is over on Friday so they can go home for the weekend. These drop-ins are quite different from the drop-outs—students who get into emotional or academic trouble, at some time during their college careers, and drop out of school, not because college isn't for them, but because running away from their problem is the only way they know how to handle it. Such students—the drop-outs—need to be helped to handle their affairs more constructively and to stay in school. Not so the drop-ins. Like Betsy, there's a good deal of evidence that they didn't want four years of higher education in the first place. Their mistake was in succumbing to well-meant, but misguided, efforts to get them to go to college.

Unfortunately, many of us believe the myth that a college degree is the only passport to a good future—that four years of college is a necessary prerequisite to achieving social and financial success, and that no competent person can be happy if he doesn't get a college education. Believing these things, parents can hardly avoid putting pressure on their youngsters to get a four-year, liberal arts education.

Parents aren't the only ones who push kids into college. Teachers and guidance counselors are also enthusiastic spokesmen for college, urging all bright high-school seniors to commit themselves to college courses. They know the advantages which accrue to college graduates in the professions and in occupations requiring a solid background of general and specialized education. They are also keenly aware that high schools are often judged on the basis of the number of their graduates accepted by the colleges.

At PTA meetings and high-school "College Nights," representatives of colleges and universities proudly announce the number of youngsters who have applied for admission. Typically, these figures run considerably higher than the number of available places. And this has the calculated effect of panicking parents into urging their offspring to apply to still more and more colleges.

What the recruiters usually don't say is that since practically all their applicants have also applied to three or four other colleges, the number of true applicants is a lot lower than the figures indicate. In addition, they often fail to mention how many applicants have the credentials to merit serious consideration. Unfortunately, some colleges do not discourage applications from students unlikely to succeed.

The Federal and state governments spend millions of dollars each year to help needy students enroll in college. Assuredly, money should be provided to help qualified high-school graduates who lack funds to attend four-year colleges and universities. However, government money should be spent on students who have an inner drive for a college education, and not on those who would rather be doing something else.

What can be done about it? How can our young people be protected from well-meant exploitation?

First, parents should realize that children—at all stages of their development from infancy through adolescence—have individual patterns of growth. Each youngster moves toward maturity at his own pace. Not all are ready for college at eighteen, not all will be best served by going to college at any age.

Parents should ask themselves why they want their sons and daughters to go to college. To keep up with the Joneses? To add to family prestige? To widen their children's social contacts? To enable their young to attain better-paying or higher-status jobs and careers? While there's nothing necessarily wrong with any of these reasons, none of them will carry much weight unless the youngster also wants a four-year college education. And in any case, though people with college educations generally earn more money and have higher social status, this doesn't always follow. There are plenty of very high income people, and there will continue to be, who haven't gone to college. And conversely, not all college graduates by any means do well financially or socially. There are many people, following their own bent, be it mechanical, artistic, housewifely or whatever, who don't care at all for the snobbery of false social standards, and who achieve, therefore, true status, stemming from their faithfulness to themselves.

To serve youngsters well, parents, guidance counselors, school administrators, and teachers should avoid over-selling college to all students who are good test takers. It is one thing for school officials to remove roadblocks from a student's path, it is another to overrule his personal feelings and desires in urging him to go to college.

The conventional liberal arts college doesn't fit every youngster. Some are not mature enough to study and learn on their own. They may do well in high school under the eagle eyes of teachers who make sure that homework assignments are done on a day-by-day basis. But they lack the commitment, or the judgment and persistence necessary to develop and follow their own schedules.

High-school students who are not ready for college should be helped to continue their education in ways appropriate to them, perhaps in specialized training programs or direct work experience. For example, there are State supervised technical schools which offer apprenticeships in many crafts and skills—in home decorating, commercial and industrial designing, photography, the mechanical trades, electronics, and so on.

Educators and parents should actively promote the creation and expansion of institutions other than the traditional four-year colleges and universities. Technical schools, and two-year community or junior colleges are admirable alternatives to a traditional four-year program leading to a bachelor's degree.

Those in charge of college admissions should discourage applicants who do not have the attainments, personality, or goals that a four-year college education requires, and should steer them to other kinds of training and learning.

College is a necessary preparation to achieving advanced standing in the professions, but it is not necessary to any number of other vocations, including some highly creative ones.

In short, though a college education should indeed be available to every qualified youngster who wants one, it should not be forced on those boys and girls who won't benefit from it. College isn't for everyone, and to pressure youngsters into thinking that it is, is to do them a great disservice.

Mr. McCANN. In today's paper I noticed the grocery industry is seeking 250 trainees specifically from minority groups.

Also, I would like to submit for the record in response to a question that was asked the annual report of the Los Angeles Trade-Technical College. This report reflects that 19 percent of the funds of revenue received in 1965–66 is from State contributions, 4 percent from Federal and State vocational education funds, 0.7 percent comes from Public Law 85–864, title VIII, and district taxes and other revenue from the local basis represents 76.3 percent.

So, I will give you this as a matter of record.

Mr. Hawkins. Without objection that will be entered into the record at this point.

(The information referred to follows:)

REVENUE RECEIVED DURING 1965–66 FOR LOS ANGELES TRADE-TECHNICAL COLLEGE

[Including Branches—Excluding Summer School]

State contributions (basic aid plus adjustments $128.09×1965–66 A.D.A. of 7360)	$942, 742. 40
Federal and State vocational education fund	215, 010. 40
Public Law—85–864 Title VIII (Technical Education Program)	35, 593. 09
District taxes and all other income	3, 867, 922. 12
Total income received during 1965–66	5, 061, 268. 01

Investment in Fixed Property and Equipment, Los Angeles Trade-Technical College and Branches, Junior College District, Owned

Total investment:	
Land	$3, 093, 534. 33
Building and appurtenances	16, 930, 061. 93
Equipment	3, 482, 544. 87
Total	23, 506, 141. 13

PER CAPITAL COST CLASSIFIED AS TO EXPENDITURES, CAPITAL OUTLAYS AND INDIRECT CHARGES NOT INCLUDED, SUMMER SCHOOL EXCLUDED

Years	A.D.A.	Instruction	Operation	Maintenance	Total
1965–66	7, 360	$484. 56	$79. 74	$44. 20	$608. 50
1964–65	6, 863	470. 58	82. 56	50. 48	603. 62
1963–64	6, 609	432. 31	79. 28	74. 91	586. 50
1962–63	6, 307	423. 60	80. 59	47. 73	551. 92
1961–62	6, 271	409. 18	80. 50	49. 95	539. 63
1960–61	6, 000	400. 87	73. 22	37. 55	511. 64
1959–60	6, 171	353. 04	67. 37	43. 33	463. 74
1958–59	6, 110	324. 65	62. 47	43. 55	430. 67
1957–58	5, 586	314. 02	62. 60	39. 47	416. 09
1956–57	4, 679	305. 73	59. 78	46. 12	411. 63
1955–56	4, 698	266. 33	45. 37	26. 75	338. 45
1954–55	4, 512	252. 76	41. 50	30. 58	324. 84
1953–54	4, 137	249. 09	39. 82	43. 78	332. 69
1952–53	3, 541	251. 07	42. 52	21. 94	315. 53
1951–52	3, 436	225. 17	39. 77	23. 50	288. 44
1950–51	3, 650	207. 75	35. 82	21. 69	265. 26
1949–50	4, 020	175. 64	28. 47	19. 19	223. 30

DEPARTMENTAL AND ASSOCIATED STUDENT FINANCES, RECEIPTS AND EXPENDITURES FOR FISCAL YEAR ENDING JUNE 30, 1966

The college has a Business Office which is operated under the direction and supervision of a Bursar. The Bursar is responsible for all funds turned into the Business Office as to receiving, accounting, and disbursing said funds. Money is received from associated student dues and fees, store sales, student production of the several departments, gifts and scholarships to the college, etc. He is also responsible for the purchase of supplies, materials and services from these funds. All matters of business clear through this office. The report of the Bursar for the year ending June 30, 1966, is as follows:

Receipts		$874, 948. 18
Disbursements:		
Accommodation	$25, 811. 57	
Equipment and ground improvement	9, 594, 35	
Expenses	22, 482. 80	
Salaries	204, 610. 67	
Scholarships	26, 505, 73	
Student activities	96, 843. 40	
Material—Department and store	489, 099. 66	
		874, 948. 18

Receipts were obtained:
44.10 percent from associated student activities, accommodations, scholarships and other services.
55.90 percent from departments and store.

Mr. McCann. Basically, our particular role here would be to encourage Congress to sustain the support they have been giving to vocational education with the pledge that industry will carry out its role, and specifically in California, and as it particularly relates to the comments you made at the beginning of today's session, Congressman Hawkins.

Some of the Senators who worked on this program before they assumed their particular roles in Washington were Senator Paul Fannin, Senator Jacob Javits, and Senator Charles Percy. Any of them would supply additional information, I am sure, as to what industry can do.

One of the important items I would like to bring to your attention, I think, also relates to some comment made, was this realistic course of action. It should be designed to aid teacher inservice programs and programs to the students pointing out the average student will not graduate from college. It is immediate and significant, because of the need of increased numbers of technicians required for business and industry.

We are certainly satisfied with the accomplishments of this school and the educational systems in California, but they need help, and you gentlemen are in a position to aid them.

The entire community must be mobilized behind industry and education who are now compelled to create techniques for neutralizing unrealistic parent pressures for their children to get to college at all costs.

Being parents ourselves, we must discount the national awareness that far too many students are aiming at, or attempting, traditional college educations and are unable to profit by it.

Again with your assistance, we hope that we should acknowledge the necessity for skilled manpower as well as in vocational training.

I would like to bring one or two items to your attention that, hopefully, the people interpreting this legislation, with your guidence, will utilize some of these techniques. We perhaps should move into motivating adults into say a spirit of seventy-six, meaning 1976, as vocational education will relate to the American society.

I would like to bring to your attention one grant that has recently been granted to California under the wisdom of Congress and the administration. This has to do in the field of police science. The funds available in this area will be used to motivate young people into the field of police science.

Certainly this could serve as perhaps an example as to how best we could motivate other people into vocational fields.

This is significant because today in this very city there are 210 police officer vacancies. The salary starts at $655 a month. The Sheriff's Department of the County of Los Angeles is in a similar situation, as is the California Highway Patrol.

These jobs require a high school diploma and additional schooling in junior colleges is available. As was mentioned earlier, numerous colleges do have courses in police science. It is very helpful.

There is a program called the American industry project. It has been going on for 4 years, and their final studies will be next month in Los Angeles dealing with subjects in the curriculum in vocational education. I think their gearing is mostly to the Eastern schools as to how they can get direct curriculum for employable skills.

We would also sustain the suggestions of Congresswoman Mink in that certain guards are put on these particular programs as relates to scholarships and fellowships so that you don't have some of the people in higher education, in effect, supplementing their own income rather than producing something meaningful.

I would bring to your attention the junior colleges have been working with many, many new programs and coming out this year are programs that have been developed over the last 18 months, and it is something, as you are acquainted with, that doesn't happen overnight. There will be a junior college program throughout the State with four industries in California in which the student will go to class for one semester, work in industry for one semester, and then back into school, and this will be done over a 3-year period. It is especially designed for counselors.

We do have two programs, one in southern California, one in northern California this summer, in which counselors will be brought into industry for 4 weeks and will receive compensation. This is being coordinated by the State department of education, and this will acquaint counselors in this field of vocational education into the new innovations in industry.

I did mention that they would receive some compensation. I believe the minimum would be $100 a week.

I know the time is late. I would like to make one more comment, Congressman Hawkins.

The distinction between the NYC program and the work-study program—under the NYC program we have brought in the youth for use in our own office under that particular program. There is a great distinction.

In the work-study program you are working with people who are working and attending school, they are working on specific problems, getting credit for their particular courses, and they are answering to their teachers. It is well coordinated, and it is related to the curriculum.

On the other hand, the NYC people are a tough group to work with. They need personal counseling. They need someone to work with them with patience, and they need more individual care than a lot of industries and a lot of organizations can give when you make a comparison between the work-study or work experience program. These factors must be taken into consideration.

Now, as both of these relate to what we are doing in California, CASA, the California Association of School Administrators, completed a statewide CASA survey which the Industry-Education Council supported, and they came up with 10 immediate needs. The most important one, and again I will make this a matter of record, was the work-study experience program. This was 85 percent of the students in school in the secondary schools of California.

That is briefly summarized. I will be happy to supply any additional information or answer any questions. I know the time is late for lunch, and this is a brief recap, but I can sum it up this way. In California, also in New Mexico, under the former Governor of New Mexico, Jack Campbell, in Arizona it started with former Gov. Paul Fannin from the operations in California and now being conducted by, I think, Boyd Givins, the vice president of Ramada Inns, this educational activity, industry-education, which offers all the unique resources of industry at no cost to the educational community.

This is a good example here, at Los Angeles Trade-Technical College. They have over 400 industry people working with this school to supply them aids on curriculum, materials when needed, and also equipment.

Thanks again for the opportunity.

Mr. **Hawkins.** Thank you, Mr. McCann.

Do I understand you have made a specific recommendation, among others, that the work-study program under the Vocational Education Act and the NYC program under the Economic Opportunities Act be maintained as separate programs?

Mr. **McCann.** Yes. This would be a definite firm recommendation from our viewpoint, not only from the logic of it, but from the personal experience.

Mr. **Hawkins.** Mrs. Mink?

Mrs. **Mink.** Yes. I have one question only.

In the materials that you distributed to us there is a document entitled "Minutes of Board of Directors Meeting, December 20, 1966."

And on page 2 you make reference to a "Vocational education program of the council will be kicked off by the California Task Force on Work Experience Education."

I wonder if you could comment on that item.

Mr. **McCann.** This is a result of this CASA survey, as we call it, when the administrators throughout the State indicated this was their primary problem, then working with industry-education sets up a statewide task force to acquaint industry as to the needs of the educator, and to also outline to them how best industry could get into this particular work experience program.

After a series of meetings, it was a whole year in which they approached the problem, the task force decided the best way to approach it would be a kit for industry people to show them this is how you do it, this is the problems you will run against, this is the answer to some of the problems in the past.

It covered the whole problem of bringing young people into industry, the compensation, the union problem. Working with the various agencies plans were finalized so a kit that goes to industry will say this is how you do it, this is the area where you will have problems, and this is how to get around it.

To the educator a different kit went saying industry is willing to support this program. As of a certain date we would like to have action. Call a meeting of the county superintendents to tell them industry is prepared to do this and industry will be on hand to reaffirm their action.

After this meeting there will be a statewide meeting of educators, and this meeting I believe will be next month in San Diego. All of the work experience teachers will be advised that this is what industry is perpared to do, and this is how you do it.

We are hopeful by September 1, 1967, it will increase the program by thousands of percent.

Mrs. **Mink.** Thank you very much, Mr. McCann. Mr. Chairman.

Mr. **Hawkins.** Thank you very much, Mr. McCann.

The meeting will be recessed until 1:30 this afternoon.

(Whereupon, at 12:20 p.m., the hearing was recessed to reconvene at 1:30 p.m., the same day.)

AFTERNOON SESSION

(The subcommittee reconvened at 1:30 p.m., Hon. Augustus Hawkins, presiding.)

Mr. **Hawkins.** The hearing will come to order.

The next witness will be Mr. Glen Guldberg, director of vocational education, Citrus College, Azusa, Calif.

If you are ready, we welcome you as a witness before the committee.

STATEMENT OF GLEN GULDBERG, DIRECTOR, VOCATIONAL EDUCATION, CITRUS COLLEGE, AZUSA, CALIF.

Mr. GULDBERG. Thank you, Chairman Hawkins.

I have a prepared statement. I will furnish you with a copy of it. It is relatively short and to the point.

Mr. HAWKINS. The statement in its entirety will be printed in the record at this point.

(Mr. Guldberg's prepared statement follows:)

STATEMENT BY GLEN R. GULDBERG, DIRECTOR, VOCATIONAL EDUCATION, CITRUS COLLEGE, AZUSA, CALIF.

My name is Glen R. Guldberg, Dean of Vocational and Technical Education, Citrus College, Azusa, California.

Student enrollment: Full-time day—2,600, extended day—3,000.

Citrus College has been the recipient of funds provided through the Vocational Education Act, PL 88-210, since its inception. These funds have enabled our school to add vocational educational programs in the occupational areas of: Cosmetology, Dental Assisting, Vocational Nursing, Numerical Control Machining, Office Occupations, Medical Assisting.

In addition to new offerings as mentioned above, expansion and upgrading have been provided in the areas of: Auto Mechanics, Drafting, Data Processing, Business Education Transcription, Electronic Technician.

New teachers added to our staff as a result of new programs since 1965 total ten while the number of teachers acquired for expansion of existing programs is three. This gives us a total of thirteen new teachers added since the inception of VEA.

New program development and expansion of existing programs have enabled us to accommodate some 405 students in new, full-time vocational programs per year. This does not include extended day offerings or program expansion.

This may seem to be adequate, but in reality it is about 50% of what could have been accomplished had more VEA funds been available.

The condition of our present vocational education buildings is becoming almost intolerable. We presently have only 2,450 square feet of available space that can be classified as permanent for vocational education training in trade and technical programs. Another 13,256 square feet are being used in buildings classified as temporary since about 1938. These buildings fail to meet the standards of the Field Act. Our programs are competing with the termites in the temporary buildings, and I'm not sure who will win—funding for the new vocational buildings or the termites.

The redirection of MDTA funds within California has eliminated some 125 persons per year previously being trained at Citrus College.

Citrus College, even though it is the fifth oldest junior college in the state of California, has never been or will ever be wealthy. The local tax rate is among the highest in Los Angeles County, and the amount of assessed valuation behind each student is among the lowest.

For our institution, and others in California, to meet the expanding needs of vocational education we must locate additional funds for new construction, new equipment, teacher upgrading, vocational counselors, work experience coordinators and other support personnel.

Even though the Vocational Educational Act of 1963 has injected us with its present funds, it still expects the local districts to assume a burden they cannot bear. At the present time bond issues and tax overrides for education are failing at a rate in excess of 53%. There is a property owners' rebellion against any kind of a tax increase.

Let me stand up and be counted for the new programs implemented and the persons who have been trained and made employable as a result of training received from VEA funded projects at Citrus College. I only reiterate that it is half of what Citrus College could and should have done in the same period of time had more support funds been available.

May I take this opportunity to thank the Committee for their interest in this endeavor.

Mr. HAWKINS. Fine. Thank you, Mr. Guldberg.

I assume from what you have said then that there has been a tremendous growth in the college since the passage of the act in 1963 and as a direct result of it.

Mr. GULDBERG. As far as vocational education is concerned, yes, sir. We have made great strides.

Mr. HAWKINS. Have you had an opportunity to read the bill, H.R. 8527, or any of the other bills?

Mr. GULDBERG. I have not, other than that I understand that it is to expand and accommodate for additional needs.

Mr. HAWKINS. Well, we do have copies of it, together with an analysis, and I would appreciate it if you would, after reading it, like to comment specifically and possibly through correspondence with us on whether or not some of the proposed changes would seem to go to the heart of the problem which you have raised.

For example, do you have the work-study program?

Mr. GULDBERG. No; we do not.

I have inquired about the availability of funds on work-study programs on two different occasions and, of course, I was told to forget it, because there were no funds.

Mr. HAWKINS. Would you say it would be desirable to have them if they could be made available?

Mr. GULDBERG. Most assuredly.

Mr. HAWKINS. Then what about the question of the teacher shortage that you spoke of? Do you have any problems in recruiting competent teachers?

Mr. GULDBERG. Well, I would like to put it this way. That if we had to come up with a teacher in a week or two, we probably couldn't in many of our areas, but given time, by hook or crook, somehow or other, we finally do locate a teacher for a particular program, but I know there is certainly no backlog of these teachers for many reasons.

Mr. HAWKINS. Often criticism is made that the equipment and techniques used in some of the schools throughout the country are terribly inadequate and obsolete. To what extent have you been able to upgrade or keep facilities at a college such as yours, which I assume is one of the smaller types, up to date on the newer techniques and the latest available equipment?

Mr. GULDBERG. Well, I would say on a percentagewise we are probably exposing about the same number of students to new programs implemented in the last 3 years, and the continuation and expansion of the programs that have been in existence for a number of years.

So, actually, our new programs are much more up to date than our old programs.

Updating an area such as a machine shop and machinists, and so forth, is terrifically expensive. Local districts cannot possibly afford to do this type of thing.

Mr. HAWKINS. Would you say there is a tremendous need to obtain financing for this purpose in order to keep up to date?

Mr. GULDBERG. Very definitely, and I can't emphasize it too much.

Mr. **Hawkins.** I see you direct an admonition about Federal funding.

Would you also say it would be desirable if we get additional State funding?

The testimony before the committee is there really hasn't been any increase at that level for the last 12 years. Would you say that also attention should be directed at the State level as well as the Federal level?

Mr. **Guldberg.** Yes. I would say this. However, I think, inasmuch as I am a property owner, most of these taxes come out of our own pockets, and we are certainly interested in more money, whether it comes from cigarettes or whatever. Not the property owner.

Mr. **Hawkins.** Are you indulging in a conflict between being a property owner and an educator?

Mr. **Guldberg.** No, sir.

Mr. **Hawkins.** Do you really consider that the expenditure of money in this direction is in the interest of the property owner rather than say not having persons who can become gainfully employed and become problems on society?

Speaking then as a property owner, would you conclude this expenditure is unwise even at the State level?

Mr. **Guldberg.** No. I would not conclude this.

Mr. **Hawkins.** Thank you very much, Mr. Guldberg.

Mr. Joseph Stevenson, San Diego city schools, San Diego, Calif. Mr. Stevenson, it is nice to have you come up to be with us today. Since you have come from a long distance, we want to give you a little extra pat on the back.

STATEMENT OF JOSEPH STEPHENSON, SAN DIEGO CITY SCHOOLS, SAN DIEGO, CALIF.

(Prepared statement by Mr. Stephenson follows:)

Statement by Joseph H. Stephenson, Director, Vocational Education, San Diego Junior Colleges

INTRODUCTION

I appreciate this opportunity to appear before you to present evidence of the way public schools and in particular the San Diego Junior Colleges are meeting the impact of increased activity in training and retraining through the partial reimbursement of the Vocational Education Act of 1963 funds. I hope the information given you on the San Diego program will be of assistance in your appraisal of present and proposed legislation.

QUALIFICATIONS OF THE PANEL MEMBER

My name is Joseph H. Stephenson, Director of Vocational Education at the San Diego Junior Colleges. I am directly responsible for the organization and the functioning of the total program of vocational education; pre-employment, upgrading, and retraining. For the past 29 years I have been in vocational education as a teacher, teacher trainer, apprenticeship coordinator, advisor, and administrator. I have assisted the State Department of Education, Bureau of Vocational Education each year in evaluating projects submitted by local districts. In 1952 thru 1954 I served under the U.S. State Department as an advisor to the Indonesian Government on technical education. Before entering the field of education, I had 17 years of industrial experience as an employee and employer. While I am specifically representing the San Diego Junior Colleges, I am also speaking for the San Diego Unified School District and its twelve high schools. This statement has the following purposes:

a. to show that the San Diego Junior Colleges are now offering an effective program of vocational education within the financial ability of the school district,

b. to offer specific examples of some of the ways in which the expanding needs of one community have benefited through the use of VEA funds.

c. to indicate the areas which are not being adequately served due to the lack of financial assistance.

d. to show that there now exists in the State of California the machinery for effective training and retraining of unemployed and displaced workers without calling upon other federal agencies to do the job.

e. to indicate that training and retraining of unemployed and displaced workers has become a way of life in the various schools in California. It will not be possible to continue these phases of training without additional state and federal assistance.

This paper is a progress report of some of the indicated needs and how the needs have been partially met through the use of federal reimbursement under the VEA Act of 1963.

JUNIOR COLLEGE PROGRAM

Buildings.—San Diego is proud of an Apprenticeship Building to house some 20 apprentice programs. This building has received national recognition. It is located on the campus of the San Diego Mesa College and opened in September of 1965 at the cost of $339,000. Of this total $157,000 came from federal funds under VEA. The building occupies 40,380 square feet of space and it is architecturally designed to compliment that of other Mesa College buildings.

The Ornamental Horticulture facility is a very fine structure on the site of Mesa College, with approximately eight acres of land available for plant production. This facility was built at the cost of $104,000; VEA reimbursement will be approximately $48,000.

Equipment.—Much of the equipment in existing classes for vocational education has been obtained through government surplus, purchased during World War II, or donated by labor and management. The annual expenditures for the repair and replacement of wornout and obsolete equipment in the existing vocational shops of the junior colleges amount to approximately $40,000 a year. The annual amount actually needed is approximately $75,000. Through the use of VEA funds the equipment in the shops is gradually being replaced and brought up closer to the standards found in industry. This is a long term project and will be a continuing problem.

Instruction.—Since the inception of the Act of 1963, the expansion of the program has made it necessary to add 46 new full-time vocational instructors; the increased need for retraining of employed workers has become a way of life and requires the services of approximately 350 part-time vocational instructors. The burden of this additional expense to the district has partially been alleviated through the use of VEA funds.

New programs have been started in the following areas: Ornamental Horticulture, Culinary Arts, Hotel-Motel Management, Quality Control and Reliability, Turbine Engines, Reproduction Machine Technician, Airline Pilot Training, Civil Engineering Technician, and Laboratory Animal Technician.

San Diego Junior Colleges are truly area vocational schools offering training as indicated through the advice of occupational advisory committees. Courses are organized on the basis of need and may operate from two weeks to two years depending on the needs as indicated by the advisory committees of which there are approximately 91 actively cooperating with the school program.

The cost of the total program of vocational education in the junior colleges since the inception of the Act has been approximately six million dollars. The total reimbursement under the VEA Act for the three years, 1964 through 1966, has been $429,607.

HIGH SCHOOL PROGRAM

There are now 31 programs operating within the 12 high schools for occupational training of a semi-skilled nature preparing the students for entry jobs or for transfer into the more technical junior college programs. The San Diego Junior Colleges serve as an area technical school for the senior high schools in San Diego City. Students may attend the junior college shops for a half-day and attend their high school of residence the remaining half-day. Currently about three hundred are enrolled on this basis. These students are being prepared to enter the highly skilled trade and technical occupations. In 1964 the San Diego Board of

Education adopted the philosophy that all high school graduates should have a saleable skill as a part of the requirements for high school graduation. This is a laudable objective which would have been impossible for the district to finance without state or federal assistance. The total VEA reimbursement for this section of vocational education has been $512,000.

PRESENT AND FUTURE NEEDS

The present vocational education programs are reaching the point where it is beyond the capabilities of the district to house and finance. New fields are already being demanded by industry and the community such as: Oceanographic Technicians, X-ray Technicians. Dental Hygienists, and R.N. (2 year) ; and to pick up the pieces and continue to render service to unemployed and underprivileged abandoned by other forms of temporary federal aid.

The training need for semi-skilled and skilled industrial and service occupations is increasing rapidly. To expand these programs will require funds for buildings and equipment. Our only hope to do a really effective job is through federal legislation and financial aid. This kind of training is expensive but it is far cheaper and longer lasting that the cost of idle youth or training through temporrary emergency measures. The total reimbursement from VEA funds for the junior colleges program the past three years is approximately two-thirds of the cost of one "Jobs Now" project which was approved to put 120 persons to work, at the cost to the federal government of $650,000.

SUMMARY

In summary the public schools in San Diego have a primary responsibility for vocational and technical training for semi-skilled, skilled, and semi-professional occupations. Programs are operated in the junior colleges and high schools with state and federal assistance. There is a critical need for increased federal funds in order to keep up with the increase in population as well as the increase in the need for youth and adults to have a saleable skill prior to entering the work force. Partial subsistance to all vocational students—$5.00 a week to high school students and $10.00 a week to junior college students might just be enough to enable students to continue school and graduate with satisfaction and an entry wedge into the work world instead of becoming a frustrated dropout and becoming an added expense to society, financially and morally. The most serious financial problem is that of providing facilities and equipment required to maintain adequate standards and required to meet the needs of new vocational programs. The State Departments of Education in the United States are using every care in the distribution of VEA funds—if California can be used as an example. The small amount of money involved is paying big dividends and slowly erasing one of the disgraceful blots on the public—that of untrained unemployed youth.

It is my hope that this information will be of assistance to this committee and to the Congress in considering the continuation and expansion of the Vocational Education Act. The San Diego Junior Colleges and school district will provide additional information or assist in any way the efforts of this committee in order that appropriate action may be taken.

Mr. STEPHENSON. Thank you very much, Chairman Hawkins and Mrs. Mink.

I appreciate the opportunity to appear before you, and I hope some of the information I have here will be of assistance in your present and proposed legislation.

I am director of vocational education at the San Diego Junior Colleges. I am directly responsible for the organization and the functioning of the total program of vocational education; preemployment, upgrading, and retraining.

For the past 29 years I have been in vocational education as a teacher, teacher trainer, apprenticeship coordinator, advisor, and administrator.

I have assisted the State Department of Education, Bureau of Vocational Education each year in evaluating projects submitted by local districts.

In 1952 through 1954 I served under the U.S. State Department as an adviser to the Indonesian Government on technical education.

Before entering the field of education, I had 17 years of industrial experience as an employee and employer.

While I am specifically representing the San Diego Junior Colleges, I am also speaking for the San Diego Unified School District and its 12 high schools.

I hope I can help to show that the San Diego Junior Colleges are now offering an effective program of vocational education within the financial ability of the school district, and to offer specific examples of some of the ways in which the expanding needs of one community have benefited through the use of VEA funds.

I hope to indicate the areas which are not being adequately served due to the lack of financial assistance.

I hope to show that there now exists in the State of California the machinery for effective training and retraining of unemployed and displaced workers without calling upon other Federal agencies to do the job.

Training and retraining of unemployed and displaced workers has become a way of life in the various schools in California. It will not be possible to continue these phases of training without additional State and Federal assistance.

You see I did get "State" in there.

Mr. HAWKINS. My only reference to making the State one of the points in discussion is that we feel the Federal Government has neglected to keep up to date in this field, and we recognize that since 1963 we have a wonderful progress, but we feel the progress is not fast enough.

At the same time we would look with disfavor upon trying to increase the Federal contribution at a time when the State is either remaining static or actually retreating. We feel we will just be losing ground.

I think we want to keep up with the local districts that apparently have been doing a better job than the State or Federal Government, the Federal certainly contributing more.

My reference was not one of a political nature, but one of a genuine interest.

Mr. STEPHENSON. This paper is a progress report of some of the indicated needs and how the needs have been partially met through the use of Federal reimbursement under the VEA Act of 1963.

San Diego is proud of an apprenticeship building to house some 20 apprentice programs. This building has received national recognition. It is located on the campus of the San Diego Mesa College and opened in September of 1965 at the cost of $339,000. Of this total $157,000 came from Federal funds under VEA. The building occupies 40,380 square feet of space, and it is architecturally designed to complement that of other Mesa College buildings.

The ornamental horticulture facility is a very fine structure on the site of Mesa College, with approximately 8 acres of land available for plant production. This facility was built at a cost of $104,000; VEA reimbursement will be approximately $48,000.

Much of the equipment in existing classes for vocational education has been obtained through Government surplus, purchased during World War II, or donated by labor and management. The annual expenditures for the repair and replacement of wornout and obsolete equipment in the existing vocational shops of the junior colleges amount to approximately $40,000 a year. The annual amount actually needed is approximately $75,000. Through the use of VEA funds the equipment in the shops is gradually being replaced and brought up closer to the standards found in industry. This is a long-term project and will be a continuing problem.

Obsolescence will make the equipment again of no value. Since the inception of the act of 1963, the expansion of the program has made it necessary to add 46 new full-time vocational instructors; the increased need for retraining of employed workers has become a way of life and requires the services of approximately 350 part-time vocational instructors. The burden of this additional expense to the district has partially been alleviated through the use of VEA funds.

New programs have been started in the following areas: ornamental horticulture, culinary arts, hotel-motel management, quality control and reliability, turbine engines, reproduction machine technician, airline pilot training, civil engineering technician, and laboratory animal technician.

San Diego Junior Colleges are truly area vocational schools offering training as indicated through the advice of occupational advisory committees. Courses are organized on the basis of need and may operate from 2 weeks to 2 years depending on the needs as indicated by the advisory committees of which there are approximately 91 actively cooperating with the school program.

The cost of the total program of vocational education in the junior colleges since the inception of the act has been approximately $6 million. The total reimbursement under the VEA act for the 3 years, 1964 through 1966, has been $429,607.

There are now 31 programs operating within the 12 high schools for occupational training of a semiskilled nature preparing the students for entry jobs or for transfer into the more technical programs in the junior college. The San Diego junior colleges serve as an area technical school for the senior high schools in San Diego City. Students may attend the junior college shops for a half-day and attend their high school of residence the remaining half-day. Currently about 300 are enrolled on this basis. These students are being prepared to enter the highly skilled trade and technical occupations. In 1964 the San Diego Board of Education adopted the philosophy that all high school graduates should have a salable skill as a part of the requirements for high school graduation. This is a laudable objective which would have been impossible for the district to finance without State or Federal assistance. The total VEA reimbursement for this section of vocational education has been $512,000.

The present vocational education programs are reaching the point where it is beyond the capabilities of the district to house and finance. New fields are already being demanded by industry and the community such as: oceanographic technicians, X-ray technicians dental, hygienists, and R.N. (2 year); and to pick up the pieces and continue to render service to unemployed and underprivileged abandoned by other forms of temporary Federal aid.

The training need for semiskilled and skilled industrial and service occupations is increasing rapidly. To expand these programs will require funds for buildings and equipment. Our only hope to do a really effective job is through Federal legislation and financial aid. This kind of training is expensive but it is far cheaper and longer lasting than the cost of idle youth or training through temporary emergency measures. The total reimbursement from VEA funds for the junior colleges program the past 3 years is approximately two-thirds of the cost of one "Jobs Now" project which was approved to put 120 persons to work, at the cost to the Federal Government of $650,000.

Mr. HAWKINS. Could I interrupt to ask under what act or what program is that?

Mr. STEPHENSON. The "Jobs Now" is under the OEO.

Mr. HAWKINS. Thank you.

Mr. STEPHENSON. I don't know whether it is exactly ethical to put this in, but I had to use it as an indication that there is Federal money available, and we have used Federal money to build two buildings and service approximately 12,000 students in the last 3 years with two-thirds of the amount of money that has been available for 120 people under this act.

In summary, the public schools in San Diego have a primary responsibility for vocational and technical training for semiskilled, skilled, and semiprofessional occupations. Programs are operated in the junior colleges and high schools with State and Federal assistance. There is a critical need for increased Federal funds in order to keep up with the increase in population as well as the increase in the need for youth and adults to have a salable skill prior to entering the work force. Partial subsistance to all vocational students—$5 a week to high school students and $10 a week to junior college students might just be enough to enable students to continue school and graduate with satisfaction and an entry wedge into the work world instead of becoming a frustrated dropout and becoming an added expense to society, financially and morally. The most serious financial problem is that of providing facilities and equipment required to maintain adequate standards and required to meet the needs of new vocational programs. The State departments of education in the United States are using every care in the distribution of VEA funds—if California can be used as an example. The small amount of money involved is paying big dividends and slowly erasing one of the disgraceful blots on the public—that of untrained unemployed youth.

It is my hope that this information will be of assistance to this committee and to the Congress in considering the continuation and expansion of the Vocational Education Act. The San Diego junior colleges and school district will provide additional information or assist in any way the efforts of this committee in order that appropriate action may be taken.

I have a few comments I would like to make.

San Diego submitted an experimental project for a residential school which was selected as one of the six which would be built. We were very disappointed when that section of VEA was never funded.

The deletion of work-study funding is something else about which we feel strongly, I feel more strongly than some because they have picked up the slack through ESEA.

The thing that bothers me more than anything else is that anyone who has outstanding ability, and is going to a 4-year college or higher can get a loan or scholarship. Anyone who is down and out can get funding. The ones that I feel are the disadvantaged are the ones in the middle who could benefit by highly skilled training and could become an asset to the community, but because they cannot finance themselves through school, have to drop out.

Thank you very much.

Mr. HAWKINS. Thank you, Mr. Stephenson.

Mrs. Mink.

Mrs. MINK. Yes, Mr. Chairman.

With respect to your comments about the student who is somewhere in the middle and unable to finance his vocational training, does the San Diego area have the vocational student guaranteed loan program in effect yet?

Mr. STEPHENSON. Somewhat, but it is neither enough money, and most of the money available is used up. It doesn't go too far.

Mrs. MINK. How much money is allocated for the San Diego Unified District?

Mr. STEPHENSON. I don't know. That is in another area.

Mrs. MINK. I am advised the program has really just started in most of the communities. I think it began on April 18 in my State.

So, I was wondering whether you were speaking with regard to the efficacy of that program or with regard to just the general problem of student financial assistance?

Mr. STEPHENSON. No. It is not a very popular program in the San Diego area, because we have a floating population, and many of the students have left without paying back the loans.

Mrs. MINK. This is with the college program?

Mr. STEPHENSON. Yes.

This is the college program.

The vocational section of the college program, some of our students are taking advantage of the loan fund, but not anywhere near enough money is available.

Mrs. MINK. I am also interested in your comments about the "Jobs Now" project through the Office of Economic Opportunity.

Was this a vocational training program or simply a job-oriented program?

Mr. STEPHENSON. It is a job-oriented program where the people are put out to work on Government work or around Government buildings or any other Government facility, and they receive $2.20 an hour for this training or for this job with no cost to the Government agency.

Mrs. MINK. Was this a program directed to young people or to the over-40?

Mr. STEPHENSON. No. It isn't in the youth group.

Mrs. MINK. It sounds to me like this is the over-40 Nelsen-Scheuer amendment, Mr. Chairman.

Mr. STEPHENSON. I don't know.

They seem to be older people in the program.

Mrs. MINK. What is the average cost now for educating a 2-year student in the San Diego System in the vocational program?

Mr. STEPHENSON. $1.04 an hour, approximately.

Mrs. MINK. And that would total up to what for a year for your total vocational program?

Mr. Stephenson. Most of them would be in the program for 25 hours a week for 40 weeks.

Mrs. Mink. This is a cost to the student or to the district?

Mr. Stephenson. This applies to the district.

We say it is free public education, but they still have to buy their books, get to the school at about a cost of 50 cents a day for carfare or busfare.

Mrs. Mink. You said the most serious financial problem you are having is providing facilities and equipment. I wondered if this was a more serious problem than teacher training?

Mr. Stephenson. I am glad you brought that up.

Our situation is a little different from the ones around Los Angeles area where all the teacher training has been offered.

Let me back up a little.

All persons who are becoming vocational teachers—now, I will talk about trade and industrial teachers, because business is a little different—must attend the University of California for a minimum of 12 units of work.

In San Diego they must go up there during the summer. So, they have to keep up two homes during that period of time.

There is a move on at the present time to use San Diego as an experimental project to do the training for teachers in the San Diego area.

In the upgrading of teachers I had a program under VEA ready to submit, but it didn't get beyond my superiors.

It was that we would ask under VEA that the VEA would pick up the difference between the present teacher salary and his subbatical leave pay, which is about half.

If he goes back into industry he has to earn as much to keep up with the Joneses during the year he is in industry as he would teaching.

The only way he can do that is take a job with which he is very familiar. We need him to go into industry in say a machine shop to learn some of the tape controlled machines. The only way we can do this is by having him in industry at no cost to industry, and we would say that this is what he must study.

I hope that eventually I will be able to get this type of project submitted, and I hope that under teacher training that the VEA will be receptive to something of this nature.

Mrs. Mink. Thank you, Mr. Chairman.

Mr. Hawkins. Mr. Stephenson, I see you have stated on page 3 that the philosophy of the San Diego Board of Education is every student should have a salable skill. Does this mean older students and college-bound students?

Mr. Stephenson. No.

They consider that in this case being prepared for further education is a salable skill.

Mr. Hawkins. I see.

Then "salable skill" is used in the broad sense?

Mr. Stephenson. Yes, in the broad sense as a philosophy rather than necessarily a specific.

Mr. Hawkins. Getting back to the project about which Mrs. Mink questioned you, the Jobs Now project, these 120 people who were put to work at a cost of $650,000, could these people have qualified for entrance into the junior colleges?

Could they have gotten training and placement had they gone into the program that the college is sponsoring?

Mr. STEPHENSON. Anybody can qualify to get into the junior college if he has the interest and the push.

If he hasn't got the push, we will help him get a little push.

Mr. HAWKINS. Say they had less than an eighth grade education.

Mr. STEPHENSON. We have in the junior college under the adult education group—this happens also to be OEO—people with first-grade level education.

We have 500 in a special project under MDTA where they have 2 hours a day of basic education. This is a part of our junior college program.

They have 6 hours a day of vocational skills. We are placing them, or the State employment service is placing them. These people are sent to us without any selection.

I feel, having been in this business quite awhile, that there are very few untrainable people, and we would like an opportunity to try to prove it.

Mr. HAWKINS. You are actually saying then for $500,000 or less that you could have done the same job with this number of persons, training them and placing them on the job.

Mr. STEPHENSON. With $600,000 reimbursement we could train a thousand people and put them on the job. I wish somebody would take up that challenge.

Mr. HAWKINS. I wonder whether there was some compensation involved in this $650,000, whether these people were assisted at the time they were being trained.

Mr. STEPHENSON. Which ones are those?

Mr. HAWKINS. This "Jobs Now" project.

Mr. STEPHENSON. I think, except for overhead, I am not sure how many supervisors they have, but that the money is all paid to the individuals, or at least most of it, at $2.20 an hour.

I didn't bring this up as an argument, and I don't want to criticize any other program, because I don't know, but I do feel there must be money available in Washington more than we are getting if this type program can be funded.

Mr. HAWKINS. I wish you would help us find it. It is what this committee is looking for.

I hope you understand the proposals drafted by the members of the committee are much more liberal and go far beyond the administration approach.

We anticipate we will also have difficulty with the Appropriations Committee, and there is also a little project going on overseas that they tell us is using a large amount of money.

We share the same concern with getting more money, but, realistically, we can only say we have a real tough fight ahead of us to get these proposals adopted.

Mr. STEPHENSON. We are pulling for you and hope you every success.

Mr. HAWKINS. Thank you, Mr. Stephenson.

The next witness is Mr. George Winder, Los Angeles City Unified District, Adult Education Branch.

STATEMENT OF GEORGE WINDER, LOS ANGELES CITY UNIFIED DISTRICT, ADULT EDUCATION BRANCH, LOS ANGELES, CALIF.

Mr. **Winder.** Mrs. Mink, Mr. Hawkins.

I appreciate the opportunity to come here today. I must start out with an apology. I did not know I would be called on to make a presentation or to give you material, so, I will do the best I can to give you my observations and recommendations regarding the adult education approach to the vocational problem.

In the adult education program I represent we serve over 200,000 people in 29 locations, and a great deal of our program is of a vocational nature, including the trained technical skills, business, the distributive, and homemaking, which is approximately 40 percent of our total program.

The vocational concepts, as I know them, in the Los Angeles city schools, include the industrial arts program which I used to teach, we have the 2-year vocational or 2-hour vocational program in the high schools.

We have the exploratory program in the junior high school which provides young students an opportunity to at least expore the typical shop offerings.

We have some of the finest technical programs, as demonstrated, here at Los Angeles Trade-Tech. I think in the last 2 or 3 years private schools have been doing a fine job. They are doing some of the things I think public schools are not doing mainly because of the money situation.

Private industry is doing a great deal. The large industries quite frequently have their own training institutions within their own four walls.

However, I believe there are certain areas where adult education must fill in the overall gap, because it is only the large industries that can do this.

The smaller ones cannot afford to set up their own training programs, and this is where we see adult education as the area that will meet the future needs of adults and the young adults, and those dropping out of school and potential dropouts, and those being displaced through technology.

Many adults must finance themselves and support their families while going through training, as we have heard other people say today.

I have been responsible for many of the Federal programs in the Los Angeles City schools since their inception, beginning with MDTA where we see what the short-unit type of program could do.

We started out with the individual programs and then got into the onjob trainings and the coupled programs.

We have now three large MDTA skill centers which you are aware of, I am sure, and in each instance as we have started programs, there are certain facts that appear on the horizon.

That is, you cannot develop a good vocational training program until you have brought people up to the level where they can profit from it, and this is where we have to meet this need. The only place I see it coming from would probably be in an adult facility specifically dedicated to this purpose.

I don't see it being done in the junior colleges, particularly with the overcrowded situation they now have and with more of the emphasis upon the academic training both by the high school counselors and junior college counselors.

We are just faced with too many students.

The Vocational Education Act in the Los Angeles City schools has done a great deal to help the adult education program, particularly at the Occupational Training Center out in the San Fernando Valley which was a junior high school composed of bungalows. It was dedicated to adult education just 2½ years ago as an experimental effort to see how it would work.

It has not only worked, but the school now is filled to capacity, showing the need for full-time occupational training during the day.

Previously, we were only able to offer part-time upgrading and evening programs because of lack of facilities and specific equipment we can't use during the day.

We have also been able to go in with new innovations because of the vocational money we have had under the Vocational Education Act. We have the skill centers at midcity where we have programed instruction, both textbooks and program machines.

However, I think here is another area we can use the vocational money to develop aids that are specifically developed for the adults who have special needs, and their needs are different than the high schools or higher level students.

We again are emphasizing the short-unit training, getting a person in and getting him out because he has financial responsibilities. Many of them cannot afford to take a 1-year or a 2-year training program, and I think this is where we are meeting the special need because most of our programs are set up specifically for job readiness in the shortest time possible.

All of this is done through the use of industry advisory committees. Upon their advice and their assistance we set up the programs to meet their needs.

We have in the bureau of public assistance programs which again have shown us how to get the job done for people who have these special needs. We have a $330,000 grant this year, and it has been renewed for next year. We have operated a program for over 1,500 students since the inception of this program.

These are people who have been on public assistance and have now been relieved from that status and are wage-earning people and are taxpayers.

We have had roughly 70-percent job placement for this particular group of people.

The adult basic education program has also operated out of the adult branch. Here we have over 100 classes, and, again, the need was felt to reach the adult who could not profit from vocational training. I believe it was on this concept the EOA and later the ESEA Adult Basic Amendments were set up which provided for the basic educational programs and English as a second language for adults which leads to the ability to profit from vocational education training.

Again, I might say the basic education taught in these classes has a vocational emphasis in the content of the material.

Under EOA I would like to go along with Dr. Margaret Crawford on the counseling. I believe this is an area where we must give a great deal of emphasis. I was very impressed by her display here today and her concept of how it should work. I hope if the money is available this is exactly the way we can do it, and add a few touches of our own because I think this is absolutely necessary.

Along this line we have had to rely heavily upon the California Department of Employment. They have worked hand and glove with us on all of these programs.

As a matter of fact, under the EOA program we have actually hired counselors to work in our adult evening schools, and they counsel people for job opportunities.

Under the Elementary Secondary Education Act, again, we have provided emphasis on the counseling. Here we have, in 14 locations, what we refer to as dropout counselors, and we work directly with day school working with the potential or the actual dropout in an effort to meet them on a one to one basis with in-depth counseling to get students back into some kind of vocational program in the high school; or lead them into an adult program in the evening or one of our full-time vocational training centers.

Under the EOA we have 10 guidance specialists which, on a full-time basis where specially trained people go out into the community to work with adults and try to bring them into an educational program leading toward employability.

At the Adult Occupational Training Center in the valley we have set up the skill centers where the emphasis again is on prevocational counseling. This program was provided under the Vocational Education Act funds at the AOTC, this is in the San Fernando Valley. Classes are 6 weeks to a year in length maximum in which we try to get the people in and get them trained.

It is not the broad type program such as in a typical junior college. We do urge the people, after they have become employed, to take advantage of junior college. We think it is a wonderful opportunity, that once they are wage earners, to come back and get what is available to them free of charge.

We have another very interesting program that is developing right down the street, the Mid-City Occupational Training Center. We invite you to come in and look at our program and our skill training program because we think it is innovative and something new to help adults.

Part of the equipment and supplies and teachers are being paid out of VEA funds. We have all the program devices to help adults educate themselves and to take advantage of vocational education.

This school is operated in the old Sentous Building, which is a former junior high school. Within a year and a half it will be located in the old Frank Wiggins Trade School, which was the original site of this college (LATTC). It will be revamped and will become a full-time adult occupational training center.

Another program we are submitting a request for under VEA is a maritime training program in the Wilmington area in which we are asking for legislation now, and it is now in the legislative hopper and may be passed upon shortly.

We would enlist your support. It is proposed to bring a ship down from San Francisco. We have been told we will have free docking space and much help from industry to set up a maritime training program.

This, again, would be a short-unit training program to provide for a very drastic shortage in this area, and would be under the adult vocational education program.

We are working with management council, Mr. Art Morgan of the State Employment Service and Mr. Chad McClellan of the management council. Our schools are all working cooperatively with these agencies to try to set up training programs where we know we have a need and we know when we train people we will have employment.

Mr. McClellan has promised if we set these programs up and meet their needs they will help find placement for trainees, along with the Department of Employment.

We are working cooperatively with the various agencies. The California State Employment Service has assured us that if we will work this way with them we will establish realistic programs. They are now claiming that many of our educational programs are set up slowly and by the time the people are trained the need has been met, or there is no longer a need, or a project has disappeared, particularly if it happens to be Federal.

We feel this is the strength of the adult educational program, because it meets the need quickly.

Some one remarked this morning about the video tape type of lesson. We are going to try this out. I believe Mr. Stoker is the one got us thinking along this line when he visited the San Fernando Valley occupational training center.

We have a problem when you admit people any time during the year. The normal school program begins in September, and the doors are closed until February, and they are open for a few days and are closed until the next September, or during the summer school program.

So, people have a long waiting period.

We have the concept, let students come in any time they wish and give them programed training, and then let them use pretaped educational lessons missed. This is a video tape operation where you can show the operation on television and let the student play it back to himself, so if he comes in late he can pick up some of the information.

We are carrying on studies along this line now where it might have national implication if it proves to be successful.

In other words, I believe what I am trying to say, as part of my presentation here is we like the old upside down curriculum where you give the person vocational training and after he has got the job, and is a wage earner, and has that worry off his mind and has the peace of mind that comes with being a wage earner, to go all out to get him to take advantage of education available to him, to upgrade himself on the job, because we have all been told many times a person will probably have to be retrained several times in a lifetime these days if he is going to keep employed.

Very briefly two or three recommendations. I am firmly convinced any of the programs in which an adult is trying to support his family, he must get some kind of training allowances. This has been proven time and time again in all of our programs. A person cannot pay the bus fare and his educational cost and take care of his family and have that worry over his head and still be expected to profit from training programs set up for him. This is their big problem.

Now, in the Bureau of Public Assistance Vocational Training Program, people want to continue, but they have a problem. They have babysitting to take care of and all the other problems that goes with unemployment, and they must have some way of being supported.

We also would like to recommend, very strongly, the idea of area vocational centers. We have a little different concept, I think, than others we have heard from today. The kind of center we have in San Fernando Valley could be converted to a great use.

I don't think you can spend money to set up one center here and another group set up another kind alongside. With the cost of land and facilities and teacher budgets and so forth, I think we could establish an adult education center of sufficient size with just horsesense planning you could make it available to the high schools where the students wanted to specialize in training could be taking advantage of it either alongside the adults, which sometimes has a very good influence as long as you don't have too many in the same class, or schedule it so that the students are in one period, if they are at the high school level, and the adults follow, but they are all using the same facilities, and it would keep down the costs and make it available for both uses.

I go along again with Dr. Crawford in the increase of vocational counseling at all levels. Having been a high school counselor, I know I had 550 students to counsel, and I was certainly anything but a vocational counselor. Even though I think I have the background for it, I had no time whatsoever for any kind of personal counseling other than to keep the student going on this high school graduation program so he didn't get into trouble.

As another recommendation, we must provide some controls in legislation such as you have here, Mr. Hawkins, in which State bills or Federal, whether pressure groups or not, can't overcome the original intent of the project, such as the CAMPS being organized now. There are State bills in the hopper which could take over Federal monies and put them in one great big fund, and people other than educational interests would have the control over where all the money would go.

Such a thing as that is now being considered in the legislature. If it becomes law, we are in trouble. I bring that to your attention only.

Some of the problems we are having, particularly in the Vocational Education Act is the matching of funds. This is a real problem for us. I think you have read the papers and you know in Los Angeles city schools we had a $19 million deficit, and instead of going up in our services, I have heard some of our colleagues say we have been set back in the last few days over 12 years in our counseling program.

Mr. HAWKINS. Is part of the reduction involved in the counseling service?

Mr. WINDER. That is one of the recommendations at elementary and secondary levels.

Mr. HAWKINS. What other reduction that would affect vocational education?

Mr. WINDER. Well, consultation and this type of thing. That is, of a supervisory nature. We are so short on that now with all the Federal programs that we can just keep our head above water just making reports and keeping financial control over the money coming in, and when a less number of people have to do the same amount they can't take advantage of the things you are setting up for us.

Mr. Hawkins. Unless you receive State or Federal assistance, the adult vocational educational program in the Los Angeles unified district will remain at its present level or be reduced?

Mr. Winder. I would say, just thinking of my own division, the adult education division, at the moment, we haven't been hurt too badly. However, our matching funds, that must be put in the budget at this time of year was cut in half. Even though our proposals, that have been submitted, are approved at State level, we can't implement them because we won't have the matching district money.

The way the law is set up now you must put up new matching effort, and this means cash dollars rather than something in kind. Therefore, even if we had a half million dollars to spend from the State, we would probably, at the present, be only able to match in cash dollars less than $100,000—much less.

So, this is one of the problems. I am only presenting this as a problem. I don't know what the answer is.

Mr. Hawkins. Do you have legislation to change that at the State level so that it would be possible to continue without having to match on a fifty-fifty basis?

Mr. Winder. I think I would have to ask Mr. Wesley Smith. I haven't seen any such bills. I would have to ask Mr. Smith whether this is true.

Mr. Hawkins. If you do not have a change, would that not restrict the Federal money that would be made available if that matching requirement is continued?

Mr. Winder. I would say this would be all over the State or any State. If a specific school district doesn't have the matching funds, certainly they will have to turn back VEA money to the State so it can be used by another school district.

Mr. Hawkins. Could we interrupt a minute to ask Mr. Smith what is the situation with respect to that, because it does present some difficulties.

FURTHER STATEMENT OF WESLEY P. SMITH, DIRECTOR, VOCATIONAL EDUCATION, CALIFORNIA STATE DEPARTMENT OF EDUCATION

Mr. Smith. It goes back, Mr. Hawkins, to the thing I said earlier.

Embarrassingly, it is true. When the VEA funds became available to us first in 1964, the entire matching requirement of the act, has had to be met by local school districts because not one cent of State money was made available to meet the maximum requirements.

So, as we administered the act in California, in order to assure the fifty-fifty matching, we had to, in turn, pass that matching to the local school districts.

Now, I know it is a problem, but it isn't such a problem yet, however, that we are sending any money back to Washington. Local districts, including Los Angeles, have been able to find the money somewhere.

The State of California, when the Smith-Hughes Act as passed in 1917, immediately put up half of the cost and matched it right then and there, and then they asked the school districts to match it again, and they quadrupled the total.

I want to say one other thing here for the record. Let it not be concluded California hasn't made some funds available for vocational education on the State basis because you know, Mr. Hawkins, because of your long experience in the California Legislature, the State does make available, on an ADA basis, funds for persons who are in high schools and junior colleges.

Persons who are enrolled in vocational education programs earn ADA which is State dollars and there are those then who say this is a State contribution.

Mr. HAWKINS. Has this been the philosophy that has prevented any additional money at the vocational educational State level for vocational education, that it was through the ADA process that they were being financed?

Is this the philosophy?

Mr. SMITH. I think it is a coincidence. The philosophy has been this. So many of these acts have had their increases coincide with the new census periods and California, because of its growth, has had, even prior to this Vocational Education Act of 1963, under the Smith-Hughes Act and the George Braden proposal increasing Federal funds for vocational education.

You know our system where the legislative analyst has the responsibility to maintain as low an output as possible, and you know what the legislature is faced with in California from financial pressures of maintenance of just normal kind of services to citizens.

Education has a financial problem. Vocational education has been a part of the problem, but it has been overshadowed by kindergartens and all these other things.

I can see a certain amount of logic in the attitude of our legislature. It is difficult to make a case for $500,000 of State money for vocational education when at the same time there will be $2 million Federal money coming at the same time.

Mr. HAWKINS. This is exactly what we are concerned about. In the Appropriations Committee and in the Congress itself there are individuals who use this as an argument, that in appropriating this money it is being shifted for other purposes and that it isn't going into vocational education.

Mr. SMITH. This matter is of recent vintage, and I think maybe that it may have occurred at the same time as a lot of the other Federal aid to education.

There are other matching requirements, you understand in National Defense Education Act and some of the other acts. Very few of them have no matching requirements. All of a sudden there have been large increases of Federal funds coming to our State.

Now, I think there is an inclination, on the part of the State legislature to back off from some of the pressures on it for education in the face of the anticipated Federal funds.

This is a temptation, and I don't think there is any State in the United States that doesn't have this temptation. To the degree with which they withstand the temptation is another matter.

Mr. HAWKINS. We wouldn't want to encourage a decrease at the local level by this. I think what we would like to do is reward those who are striving to increase their effort. If it serves to discourage any financial effort at the State level it, to some extent, defeats the very purposes that we feel we are building up. We are concerned about the people who need vocational education, and as such in this particular regard not concerned about balancing the general budget of the State.

Now, it may be in another respect we are concerned with balancing the budget, but certainly not through these means.

Mr. SMITH. I know, Mr. Hawkins and Mrs. Mink, I know you understand that California has been quite benevolent as far as vocational education is concerned up to a few years ago. We have had an outstanding vocational education program, measuring it any way you want to, long before the VEA of 1963.

Look at some of the other States. Some of the other States have done less well than California on vocational education in comparison to size. Then along came these new acts, and they awakened to this need for the first time and show extensive effort, but in the last 12 years California has done a pretty good job of supporting its program.

Mr. HAWKINS. I don't want my remarks to be interpreted as being critical of this State which I am certainly proud of.

Mr. SMITH. Nor would I be less anxious to have mine considered as criticism, too, as you would understand.

CONTINUED STATEMENT OF GEORGE WINDER, LOS ANGELES CITY UNIFIED DISTRICT, ADULT EDUCATION BRANCH, LOS ANGELES, CALIF.

Mr. HAWKINS. Mr. Winder.

Mr. WINDER. May I say, Mr. Hawkins, you have a very good watchdog. He has seen to it we all put up our matching effort.

The permanent facilities versus the flexible facilities is just one other problem that I would mention here that I see as a constant fluid type arrangement that we have to have if we are going to meet one vocational need and then change it almost overnight.

My past experience in the MDTA Act is, before you can even finish a program, a new technology has changed the methodology to where you have to set up another program.

We are even making some of the classroom walls so they are flexible and you can move a wall aside and move different equipment in and have flexible utilities in a ceiling and floor. In this manner you can put equipment in and give a training program and get out, so we can meet the changing needs.

This is another reason we need the vocational education money.

I believe that concludes my observations.

Mr. HAWKINS. Mr. Winder, may I ask you one or two questions?

First, with regard to this school in the San Fernando Valley you referred to, where is that school located?

Mr. WINDER. On Wennetka Avenue right north of the freeway about three blocks in the San Fernando Valley.

Mr. HAWKINS. Which valley is that?

Mr. WINDER. That is the far western San Fernando Valley.

Mr. HAWKINS. It seems to me I have received some criticism of the school in that it was located in a wealthy district. I don't know really where it is located. I am asking for information.

Is it located in a rather inaccessible or very wealthy, or what some people might refer to as a silk stocking district?

Mr. WINDER. It is a very nice middle-class district.

Mr. HAWKINS. Middle-class stockings?

Mr. WINDER. It is directly across the street from the gates to the entrance of Pierce College, if you know where Pierce College is.

It is a site that normally, you would say, we could have never made it in. We felt this might be a bad choice, but what can you do? The facilities were available, the bungalows were there and we were given a 2- or 3-year period to try it out. We had no idea of the enthusiastic acceptance there would be toward such a center by adults.

Apparently the adult need is fantastic.

Mr. HAWKINS. I assume local residents out in that area were very persuasive.

Mr. WINDER. I don't think they even knew it was coming. It just happened.

Mr. HAWKINS. Mrs. Mink.

Mrs. MINK. I have no questions.

Mr. HAWKINS. Thank you, Mr. Winder.

We appreciate the statement you made.

The next witness is Maurice Sherman, National Technical Schools, Los Angeles, Calif.

Mr. Sherman, it is a pleasure to welcome you as a witness before the committee. We are very cognizant of the role you and your school have played in this field.

I certainly want to commend you for the very excellent operation. I have visited the school and can certainly say it was my own experience in visiting the school and in knowing many of your graduates that you are doing an excellent job. We are certainly proud to have the private sector represented by several individuals today, including you.

STATEMENT OF MAURICE SHERMAN, NATIONAL TECHNICAL SCHOOLS, LOS ANGELES, CALIF.

Mr. SHERMAN. Thank you very much, Mr. Chairman, for those kind remarks. I guess if I was smart I might sit down right now.

May I express our appreciation for this opportunity to testify at these hearings?

Unfortunately, due to the short notice I, like the previous speaker, have not prepared remarks for distribution, but I will read what I have prepared as some informal notes.

As you know, private schools did not fall within the purview of the Vocational Education Act of 1963 and, I must confess, some of my remarks may not, for that reason, be germane to your discussions, but, of necessity, must be of a general nature.

Nevertheless, as one of the oldest private vocational schools in the West, National Technical Schools may have some thoughts that will be of interest to you.

We have been in Los Angeles since 1905 and today have an enrollment of slightly over 1,000 students pursuing courses in five general vocational areas. We have a staff of 60 full-time teachers in our resident school. We also conduct training by corresponding throughout the free world in Spanish, Portuguese and the English languages.

The urgent needs for better quality and quantity of vocational education are too well documented to require further exposition. Suffice it to say that the needs of industry far outstrip the capability of existing training resources. America's leadership in technology rests directly on its supply of adequately trained technical manpower.

In addition, the anomaly of jobs in search of men and men who cannot qualify for jobs has awakened America to the potential of vocational education as a solution to unemployment and its attendant social disorders.

It is our conviction, Mr. Chairman, that the full educational resources of our community must be brought to bear on this problem. To this task, the considerable energies of ethical and approved private vocational schools should be brought.

In southern California alone it is estimated that there are over 400 private vocational schools. On a national scale this represents a substantial resource of experience in skill training with staff and plant of considerable value.

The merits of using reputable private schools in time of national need has been proved time after time. In our own case, for example, we trained veterans after World War I, World War II, the Korean conflict, and now the new Cold War GI bill. In addition, we have trained a considerable number of men under MDTA. In this connection, it is interesting to note that the premise that the use of private schools with their existing facilities and staff can save tax dollars is well supported by some recent figures just released on MDTA costs for individual referrals.

Actual costs per trainee for the period 1965 through March, 1967 in California showed private schools averaging $845.84 per trainee as opposed to the public schools, $1,310.59.

I believe this is due to the fact in many instances additional facilities have to be created by public schools. Existing facilities can be used in the private sector. You can see the dramatic savings in tax money.

The only misgiving which we have to the proposed amendments or for that matter, to any increase in expenditures for vocational education is that they may tend to bypass existing facilities in the private sector and thus duplicate at great cost what is already available and unused.

In the past, private schools have often been bypassed because of the absence of reliable approving or accrediting agencies. In our own State, of course, we have the excellent services of the Bureau of Readjustment Education.

We are, however, well aware that such agencies do not function in other States with the effectiveness of our own.

In this connection, Mr. Chairman, I would like to call your attention to a new accrediting association which may very well fill the bill here. It is called the National Association of Trade and Technical Schools. It is less than 2 years old and probably not well recognized as yet. It has over 100 members at the present time, and it has gained the respect of many educators in its short life span.

We understand that the U.S. Office of Education may soon give the National Association of Trade and Technical Schools its official sanction as a nationally recognized accrediting association similar to that accorded a sister organization called the National Home Study Council.

I might add in passing, the work of the National Home Study Council in the correspondence school field has elicited the praise of many and has tended to eliminate disreputable schools and through self-policing has really enhanced the value and prestige generally of correspondence education.

Well, here, for the first time, Mr. Chairman, with the National Association of Trade and Technical School we have an organization where private reputable and ethical vocational schools can be identified and included in some of the provisions of the amendments here proposed.

The accrediting procedures, I can assure you, are thorough and rigid. They are self-enforced by the private school industry itself, which have long proved to be the most efficient kind of policing.

We have undergone our own self-evaluation and a document of some 75 pages was prepared, and I can assure you it is a very stringent process and one I am sure will meet almost any standard of accreditation which is in use for other institutions.

We would suggest that some of these amendments that you have proposed could possibly be broadened to include private accredited vocational schools. In just glancing at the set given me yesterday I found two sections where possibly private schools could play a part. I am not as familiar with the bill as I am other bills. You certainly could perhaps suggest other sections.

I saw section 4 which related to residential schools, and section 5 which related to teacher training, but, as I said, other provisions with which you are undoubtedly more familiar could be expanded to include the type school I have suggested.

A precedent for this kind of recognition now exists in the National Vocational Student Loan Insurance Act of 1965, the so-called Dent bill, which has been previously referred to because this bill does provide for virtually automatic approval for schools accredited by a nationally recognized accrediting association.

This would point the way to us, I think, in which private vocational education can be effectively extended.

In closing, may I thank you for the privilege of being here this afternoon and to represent my own school and our sister schools in the private school fields.

Mr. HAWKINS. Thank you, Mr. Sherman.

You made reference to the Dent bill. Under that bill, as I recall that bill, it would also allow you to qualify if you were certified by or approved by the Office of Education, and I think that that guideline indicates that with approval by a Statewide accrediting agency you would still qualify.

Mr. SHERMAN. No, I don't think that is true.

Mr. HAWKINS. I think the history of the bill would indicate that.

Mr. SHERMAN. I think the language is, there are two ways, apparently. That is, if there is a nationally recognized accrediting association, or in the absence of that, an advisory board may be drawn up at the national level by the Office of Education.

Mr. HAWKINS. I think it even goes beyond that, if you would possibly read the report. You don't look at a congressional act and read it the way you would a State act. The law says one thing, but if the history of the bill says something else, or the report, that is it.

It is my understanding that some of the schools in New York, and I think those in Pennsylvania will shortly be approved under the provision which allows the Office of Education to certify the schools.

It is further my understanding, or at least I have been assured, that private schools in this State may shortly be approved also.

If you wait until this National Advisory Council is formed, I am afraid snows will again be falling in the High Sierras.

It would seem to me if you are accredited for MDTA programs, if you are accredited by the State Bureau of Readjustment, I would assume these approvals carry with them some degree of investigation and approval of the type of schools that we would be seeking approval for.

I am sure you know better than I do whether or not through these means the so-called schools, I have forgotten the phrase you used, reputable, I suppose it was, could be eliminated.

I am sure all of us would like to eliminate these fly-by-night opportunists that have taken advantage of the GI bill of rights and others. Certainly we never had the intent to eliminate private trade schools which are reputable.

Does the approval by the Bureau of Readjustment carry some weight, or what does being approved by the State bureau really signify?

Mr. SHERMAN. I think, as I tried to indicate in my remarks, most of the bureaus and departments under the State department of education, I think they work extremely well. I think we are a leader in practically all matters of education on a national level.

I attended a meeting of the National Affairs Committee of the National Home Study Council, and we had home study schools throughout the country, and the question is what is California doing?

They do look to us for leadership.

However, there is a difference, I think, Congressman Hawkins, between the word "approved" and "accredited," the State Bureau of Readjustment Education approves, or must approve schools for issuance of diplomas, but in the matter of accreditation this is left to other agencies, generally private agencies or quasi-public agencies, and at the moment our problem in the private trade school sector is that we have nothing that really fits our needs.

I have been in correspondence with the executive secretary of the National Association of Trade Technical Schools which I mentioned, and there is a lot of stirring in the pot now apparently going on as to what direction this recognition for purposes of the Dent bill will take, and as I understand it, our own bureau chief, Mr. Summers, has been negotiating for the very thing you suggest, that is, that any school approved by the State Department of Readjustment Education in California be approved for the Dent bill, but the last I heard he was not making as much headway as he hoped.

Mr. HAWKINS. Do you know whether or not the private schools in New York have been approved?

Mr. SHERMAN. I do not know.

Mr. HAWKINS. It is my understanding they have now. I assume that is correct information. I didn't verify it.

Mrs. MINK. Mr. Chairman, you will be interested to know in the State of Hawaii five of our private schools have been certified for the Dent Vocational Student Loan program.

Mr. HAWKINS. Without the National Accreditation Agency being involved?

Mrs. MINK. That is right.

Mr. SHERMAN. That would be a situation to be hoped for. We feel the Dent bill will help us immeasurably, particularly in that middle group we are speaking of, the people who do not fall in the arms of MDTA or BRA or other agencies handling problems of those who need most urgent attention and are disadvantaged in the hard core, but rather the middle group which wants education and is not disadvantaged and just can't afford the cost of good technical education.

This applies equally to public and private schools.

Mr. **Hawkins**. I assure you, Mr. Sherman, this committee will explore this as soon as we return to Washington and will certainly be in touch with you because, if the information I have is correct, the approval will be forthcoming very shortly.

I hope that is correct information because it was the intent of Congress to do this.

Now, we did set up the machinery, but we did have a provision which would allow the Office of Education to use some discretion in this field to eliminate those schools which are not reputable, but certainly to approve those that were, and I think it can be exercised. That is my opinion, which I certainly will verify whether it is well based.

Mrs. Mink.

Mrs. **Mink**. Did I understand you, Mr. Sherman, to say you were interested in being included in the residential training feature of the bill?

Mr. **Sherman**. That was a rather amateurish and hastily drawn conclusion on my part since I am not as familiar with the Vocational Education Act as I am with others because I assumed always there was no place in it for private schools. In reading the summary sheet I picked out two areas where there could conceivably be interest on the part of private schools.

Mrs. **Mink**. Are there any residential private vocational schools now in the State of California?

Mr. **Sherman**. I would hesitate to say, but I would be inclined to say no at the present time.

There are schools, however, which attract a majority of their students from out of State. Whether they themselves domicile students I am not sure.

Mrs. **Mink**. One of the provisions under this title of the bill which may make the program not as attractive to the private schools is that no fees and tuition charges may be made on the enrollees.

Mr. **Sherman**. Well, that would probably eliminate us.

Mr. **Hawkins**. That is part of the bill that you are seeking to change, I assume.

Thank you, Mr. Sherman.

The next witness is John A. Graham, project administrator, Compton Union High School District.

Is Mr. Graham present?

STATEMENT OF JOHN A. GRAHAM, PROJECT ADMINISTRATOR, COMPTON UNION HIGH SCHOOL DISTRICT

Mr. **Graham**. Yes, I am.

I do have with me today our director of Distributive and Vocational Education, Mr. Thomas F. Zuck, who, I think can do an excellent job because he is in the midst of vocational educational development. My superintendent is here today with us also, Dr. Carl Heinz.

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It is a pleasure being able to appear before the committee today and explain what we are attempting to do in Compton with reference to vocational education, but without taking up any more time, could I beg of you to let him speak in my place because I have been down with the flu.

Mr. HAWKINS. Mr. Zuck.

STATEMENT OF THOMAS F. ZUCK, DIRECTOR, DISTRIBUTIVE AND VOCATIONAL EDUCATION, COMPTON UNION HIGH SCHOOL DISTRICT

Mr. ZUCK. My name is Thomas F. Zuck, the Director of Distributive and Vocational Education in Compton Union High School District, Compton, Calif.

It is a pleasure to have a chance to discuss with you what we are attempting to do in Compton in a comprehensive high school.

It is our feeling in Compton that we should put the horse before the cart in the correct relationship as to "who" undertakes this job of occupationally or vocationally training our young people in this country—public education or private industry? Local communities have a great stake in both plant and facilities in this country—$90 billion worth and the teaching profession has the necessary know-how.

The Vocational Education Act of 1963 begins, in a small way, to provide some of the research money, "seed" money for public education to try to do a decent job in this technological age in meeting changing needs.

Compton is just beginning its attempt to restructure its high school curriculum to provide occupational training. This first year we undertook twelve projects as of February 1, with the Regional Offices of Education both in Los Angeles and in Sacramento being most helpful to us.

They were passed and funded under the Vocational Education Act enabling us to undertake 17 occupational areas in Compton, involving junior and senior students and adults in our three high schools. Our present program involves 800 students, next year 1,600 and the following year, hopefully, about 6,000.

The job can be done at the secondary school level if we are fluid and flexible enough in public education to begin to restructure and retool ourselves. We have the plants, we have the staffs; however, there are some needs from outside sources. We feel the Federal money has been a Godsend, and, although there are some problems involved, hopefully, they can be taken care of in the near future.

In Compton we are fortunate in having a Superintendent of Schools and behind him a Board of Trustees who feel that the comprehensive high school system is the place to do the occupational training in this country. There is no stigma whatsoever for school entry level training which we feel can be best undertaken at the high school level. We do need help to do it.

Our's is a district which you know well—because you are from this part of the country. Our Board and our community feel the answer to many of our economic problems, social problems and our "special needs" can be best achieved by "excellence in education." We feel the basic Federal and State support that has been supplied is not enough.

We have adopted or are about to adopt a board policy which will provide each of our graduating juniors and seniors an entry level occupational skill.

High school occupational curriculum should be matriculated directly into our local junior college facilities so that many of our young folks as they develop a decent "image" at the high school level with a chance of success, will go on to technical training in the junior college facilities. Furthermore, in a district such as ours where our "drop-out" rate is high, our plants are old, and our needs are great—change is mandatory.

So far our VEA proposals have begun in rapid sequence in the right direction. We have a timetable of 5 years to accomplish the restructuring. We are not naive enough to believe that providing an entry level skill will enable these boys and girls to take their place successfully in the adult technical world without the basic skills of science, reading and math. These subjects must be attacked from the "occupational" point of view and from a perceptual approach. We see the need for restructuring formalized education as it relates to their occupational proficiency and earning capacity in the future. We are asking for State support on this philosophy.

We think that our teachers and staff members will be caught, along with many of the rest of us, in this technological change that is occurring. In-service teacher training will be one of our areas of development which will not require just local funds, but also State and Federal funds. Summer in-service training for teachers, rather than "moonlighting" wherever they might, can be used to advance themselves technically. Trained people returning to the schools in the fall can do a better job for the young people when they, too, can see directly what these changes are requiring.

A local businessman is giving us a brand new building which we are asking be equipped to do this "in-service" training for our teachers and also provide occupation training for another group of our young folks.

We feel the Compton School District is suited by its need for a residential school for those young people which might profit and do a better job if they had 24-hour school situation where all their physical and psychological needs could be met.

Ninth and tenth grades in our intermediate school structure should provide an exploratory occupational structure. We feel the young person should not have to commit himself prior to the 11th grade for occupational choice. Potential college students can equally profit by an entry level skill. Knowledge of the work world and ability to sustain oneself could encourage many people to go on that might not otherwise be motivated.

The whole terminology of "special needs," perhaps this term itself, needs to be looked at to determine what the special needs of our youth are at the present time. VEA support at the State level with Federal funds has just begun the process but there is a long way to go.

Public education represents a tremendous investment by the people of this country. Many of the sad byproducts of our society which we are now trying to "mop up" in the adult world could be successfully handled by your educational institutions in the first place. We feel we have the staffs, educational facilities, and faith in the future.

The area of matching funds is causing us a problem. To initiate our VEA program it took half of the reserves of this school district to meet the matching requirements for our second semester projects submitted and approved. We will shortly be talking with our board again about this problem for next year. There is a point of no return, however, where we, like other districts, cannot go ahead although we have the need and know-how and feel we could do the job. I highlight this as one of the problems we hope will be considered by your committee. Speaking of our in-service training, we have a project in Sacramento to provide for academic English, math, and science teachers to return to industry and business in the summer months to see the kind of English and math and science needed by the young people in our district to enable them to take their place successfully in the technological situation they will find themselves entering after graduation.

High school level work experience and work-study programs, which unfortunately have not been funded, have a very necessary part in the educational program we are discussing here today.

NYC has been a major blessing, as we have 340 as our allotment and 900 students eligible because of financial home economics. This is another area which needs evaluation.

We do feel that an adult program, equally geared to bring in and involve the family life of the community such as our's, basic education is needed. At the moment we have 13 classes on the adult level in basic education training or doing initial training in grades 1 through 8.

In this community the retraining is a special need, part and parcel of the kind of future education should achieve for us and this Nation. Your help is needed. We don't feel that all communities in California are making maximum efforts. We have the second highest tax rate in California, number of children per family is extremely high, and neighboring communities which have had explosive problems. We hope we can avoid such problems by excellence in education, which can solve our economic and social problems.

Mr. HAWKINS. Thank you, Mr. Zuck.

Mrs. Mink.

Mrs. MINK. Yes.

I would like to commend you for your presentation. I think this is the very sort of interest and participation that certainly we in the House Committee on Education like to see and feel. It certainly makes rewarding the effort that I know Mr. Hawkins has put into calling together this committee hearing today.

You mentioned several times you have been gratified by the support not only of the Federal funds under the Vocational Education Act, but also the commitment of State vocational education funds.

I wonder if you would comment on the details of that.

Mr. ZUCK. I was referring, primarily, to the large chunk of Federal (VEA) funds allotted to us in the go-around submitted for February 1, 1967. I did not mean additional State funds per se, but the allocation of money from the VEA Federal funds. We received advice and help from the State to get that program underway in our district.

Mrs. MINK. The new program which began in February is totally Federal monies.

Mr. ZUCK. Yes, with matching funds from the local district.

Mrs. MINK. What is the dollar differential? How much is the total program, and how much is the Federal?

Mr. ZUCK. Our total program was roughly between $425,000 to $500,000. It involved $150,000 from our own reserves plus some in kind expenditures, teachers, et cetera.

The VEA fund allotment was $227,500 which enabled us, in one scoop, to initiate 17 areas involving 800 juniors and seniors in the first go-around, plus adult training.

Mrs. MINK. Now, you mentioned 17 vocational areas or occupational areas.

Could you enumerate what these are?

Mr. ZUCK. We have looked at the comprehensive high school to see what initial skill areas were built in; for instance, the home economics department.

We have developed a medical service program for training in the hospitals and convalescent homes of our community. We have 200 boys and girls involved in those at the moment. Next year we hope to expand to 400 students and we are oversubscribed at the moment. We have more young people signed up for our programs than we have outlets for them. This means we are little better than started for the interest shown, and we could double our output this very current year.

One of the most interesting of our programs in the home economics area is the food, motels and restaurant services as entry level skills. This is the one about which I talked to you on the phone.

We are working with the food service industry and already scholarships and job opportunities are coming in for our young folks. We have 98 boys and girls on the junior and senior level in all phases of this activity plus 50 adults retraining. We operate our own kitchen, restaurant, and bake shop.

We have occupational training in the six basic shop areas, automotive, graphic arts, electronics, etc. We hope in the fall to add welding.

This program is in operation in two high schools with expansion to the third scheduled for the fall of 1967.

We can't do the kind of expensive tooling for technological entry-level skills in every school for every student, but we can make our district plants available where a student, can enroll for their interest area. We are not emphasizing more of these skills as terminal educational goals, rather as doorways of economic self-support while looking for a place in the future.

We are developing occupational, entry-level goals, feeling that if we can develop attitude, imagery, and a taste of success; we have done our job on a secondary level. We can provide the necessary employment liason with industry as part of the culminating activities of the senior year. We are beginning to gather statistics to prove this and enforce need.

In our Orange County program last year we had 100 medical services youngsters on the senior level. We took them to the employing institutions to meet the personnel boards who gave them application blanks, interviews, and so forth. All students wanting jobs started to work the Monday after graduation. We feel this kind of service should be provided within the comprehensive high school. This involves skilled counselors in the occupational areas; it involves realization on the part of administrators as to where their functions really lie.

Have I answered your question?

We have underway for fall cosmetology, an expansion of our food services, clothing, construction, aviation technology, basic upholstery, horticulture and floriculture, and the development of our visual communications center which will overlay five different areas of occupational training and can provide roughly 300 varied entry-level skills. We have on our docket, too, the office practices and related skills of the business area.

While the necessary framework lies in the comprehensive high school we must depend on funds initiated by the Federal Government to get at this job.

Mrs. MINK. Thank you very much.

Mr. Chairman.

Mr. HAWKINS. Mr. Zuck, are you convinced the program you offer is varied enough to do something besides just entry skills without additional training?

Mr. ZUCK. By varied enough, do you mean enough——

Mr. HAWKINS. Enough different occupations to select from, particularly those that are new and are developing and not merely the basic ones, many of which are being eliminated.

In other words, do you think that within your system that you can possibly, under the financial situation that you operate, offer enough different occupations and intensive enough training and offer counseling and so forth in order to really give to the student a wide choice as well as the very best training.

Mr. ZUCK. We are not at that point yet. We have just taken the first of what we hopefully feel will be five steps.

Certainly, districtwise and taxwise, we could not do this or maintain it yet. We do feel some of the burden can be absorbed by the local districts. Certainly we should not depend upon continuing help from the outside, but when you are attacking an institution which has long been settled, to effect restructuring such as industry is doing with the space program, this takes some doing—in hardware and staff.

This way we have used the VEA funds to provide us that interim structure. Ultimately we should bear a large portion of this ourselves. We are recommending our research visual communications center to provide a flexible enough situation to do some of our own development.

Mr. HAWKINS. I certainly want to join Mrs. Mink in commending you on the program that you are operating. We have certainly enjoyed your presentation, and I think it is most helpful.

Mr. ZUCK. We hope you will come to see us.

Mr. HAWKINS. There are several witnesses who wish to make brief statements concerning a particular aspect of the subject, specifically, the operation of the work-study program as compared with the Neighborhood Youth Corps.

I don't know how you would like to handle it, but suppose I merely call you as the names have been given to me.

The first name is Mr. B. Gordon Funk, supervisor, Industrial Education, Division of Secondary Education, Los Angeles City Schools.

Mr. SMITH. He had to leave, sir.

Mr. HAWKINS. The next one is Mr. Dirk M. Dunnink, coordinator of work programs, Fontana Unified School District.

Mr. Dunnink.

STATEMENT OF DIRK M. DUNNINK, COORDINATOR, WORK PROGRAMS, FONTANA UNIFIED SCHOOL DISTRICT, FONTANA, CALIF.

Mr. DUNNINK. I work for the Fontana Unified School District as supervisor of work-study programs. I coordinate the NYC program and the work-study program.

Under the work-study program we have approximately 77 students employed, and in the NYC program I have approximately 60 and 70.

The work-study program mainly caters to the vocationally oriented students, and I have them assigned to the elementary school offices, senior high school offices, city hall, libraries. They work on the switchboard and as secretaries and office aides, as we call them, shop aides, keypunch operators, et cetera.

The requirements to be classified as a vocational student at present is they must be taking two vocational courses and should have taken two such courses last year, opposed to the NYC program, in which the eligibility is strictly based on financial eligibility.

The two programs are in the work-study program, entirely different from each other.

Once you have assigned a student there is not too much work left. On the NYC program, this is different. We have to counsel these students.

For instance, the last 2 weeks I have been working on trying to place four mentally retarded students. This is kind of a pilot program, wherein we are trying to enroll these students in the NYC program. We are also trying to work with students in our special education classes.

I have quite a large number of students working as custodial aides. These students would not be eligible in the work-study programs since they have to be vocationally oriented, and these students are not.

Unfortunately, we have been told we will not be funded on the work-study program next year, and we don't know what to do.

Mr. HAWKINS. What was the reason given?

Mr. DUNNINK. No reason given, just we wouldn't have any of the funds. We don't know what to do. We are at a loss. We have hundreds of students who had already asked me, "Mr. Dunnink, can I be employed again the next school year?" I have to tell them, "No."

I have proposed that if we took our matching by the district and use this amount of money to initiate a work-study program on our own. But it would be small and impossible to keep 75 students in the program.

The work-study program has been tremendously successful. We have a very good business department in the Fontana High School. We need this program because our students in the Fontana area, have very few opportunities to be placed in a position before graduation. There are not too many opportunities besides Kaiser Steel and a few other plants, that is all, and I have been unable so far to solve this problem, by trying to get the private sector interested.

There are just no opportunities for these students. Again, these students need this income, and the practical experience they obtain is tremendously valuable.

We are real sorry. We hope that something can be done.

Mr. HAWKINS. Thank you, Mr. Dunnink.

May I interrupt this series of witnesses?

Is Mr. Stanley Ross here?

I must apologize, Mr. Ross. I used a pencil that slipped, and I crossed your name off as having testified, and I should have called you earlier.

Mr. Ross, we are glad to have you.

Mr. Ross is director of vocational education, Downey unified district.

STATEMENT OF STANLEY ROSS, DIRECTOR, VOCATIONAL EDUCATION, DOWNEY UNIFIED DISTRICT, DOWNEY, CALIF.

Mr. Ross. Chairman Hawkins, and Mrs. Mink.

I thank you very much for this opportunity to provide this information to you.

I would like to point out the extreme need for vocational education in high schools, because I feel our district is one that has been fairly typical of schools across the country.

Downey has a population of 93,000 people with 5,000 students in two high schools.

For years it has been felt that about 70 percent of the students were going to college, although this was not based on any type research.

In 1964 a thorough followup study was started by the district to find out what was happening to its graduates. At that time it was determined that about 50 percent of the students or graduates enrolled in college, and subsequent studies have verified that about 20 percent of them finished a 4-year degree.

Starting from a program that was general in nature with only one vocational program, that being in secretarial and clerical occupations, our school district has started a developmental program in vocational education.

Luckily, the VEA came along at the same time we finished the first followup study, and the Administration was receptive to the idea of vocational education.

The first thing that was done was to submit a project for a supervisor of vocational education. I left my job as assistant principal at Downey High School to become the supervisor of the neighborhood youth corps for 2 weeks. And then the supervisor of the vocational program.

We started several activities immediately, one of them was to appoint advisory committees. I would like for you to know what advisory committees have done for a small district. They have given us an opportunity to get community people into the schools and find out what our facilities and programs were, what we were lacking, and it also gave us a chance to associate our counselors and teachers with people from business. On our tours of the schools we had counselors conferring with people from industry so that counselors could also see some of the facilities they hadn't seen before and get acquainted with the business people.

We surveyed our community to find out what type employment opportunities there were. There were many more than we had ever realized. For instance, there were approximately 30,000 people employed in Downey, although it was thought to be a "bedroom" community. We started writing the first of 16 VEA projects that have been approved.

Through these activities we have received over $12,000 worth of donations from local business and citizens. At one time we were given six offset printing presses by a local company.

Another company heard about it and gave us one of theirs. We have already rebuilt all these presses. We have gotten truckloads of paper and other needed materials.

Local funds in the program have grown by leaps and bounds. In the last 8 or 9 years I don't suppose the district has spent more than $10,000 in the vocational education area. Since VEA we have spent many times more than that, and local funds will be $3 for every dollar of VEA funds.

Enrollments in the classes we have established have grown very rapidly. In fact, in many cases they have tripled previous enrollments because of valuable new equipment and making an attractive program.

There has been a real change in the administrator and counselor attitude. Our counselors and administrators are proud to take visitors now through the industrial lab facilities that have been developed.

We built two new buildings, one for electronics and electricity, and we are able to offer our students at Warren High School for the first time to learn about electricity and electronics, and we now have a facility for doing that.

We have had five sections of classes this year, 10 sections are signed up for next year.

I feel there are some problems. The one that has been mentioned many times today is teachers, and I think special attention should be given to the need for teachers at the high school level in vocational education. This takes a little different breed of teacher because he is working with a different breed of student. Students between 14 or 15 years old and 18 are quite different than students that are 20 and 21 years old and older. In other words, teenagers are different to teach.

We will begin having a problem with matching funds. We were lucky enough to have some surplus property in the district that has been sold now and nearly all the money used for matching funds on expanding programs.

We have formed an area of study committee on vocational education making up four school districts comprising the Cerritos College area. This group meets once a month at various locations, and we are making a concerted effort in vocational education. No one district is big enough to do the type things we want to do, but if all of us can work together we can make some very worthwhile in-service training activities and share instructional materials.

There are purely experimental vocational education programs that no one has tried before which are very difficult to sell to a school board. Such programs have merit, and in some way should be encouraged. The vocational programs we have known are primarily pointed at the middle third in ability group. We need to do some research to develop programs for the bottom third in student ability.

We have a neighborhood youth corps and a work-study program. I would favor going toward a single concentrated effort—the work-study program. I think two programs so similar are unnecessary in a high school. They create confusion. Both have the purposes of keeping kids in school and giving them an opportunity to make up for some of their handicaps.

There is a real need for the type of in-service institute program that has been started in Los Angeles City and the Los Angeles County. These need to be encouraged in order to keep teachers up on the latest technology. We can't always go out and spend a summer keeping up with industry, but through a series of Saturday workshops such as have been in the Los Angeles City a great deal of information can be put across to educators. Such workshops can be carried out in small districts by pulling several districts together. It is difficult for us to make an in-service training program for one or two teachers in a district, but several districts could go together on a county-wide basis, or even a portion of the county and develop in-service education programs. This is something needed very much.

The stimulation from these programs in Los Angeles City has been tremendous.

I would like to express my appreciation for this opportunity.

That is the end of my presentation.

Mr. HAWKINS. Mrs. Mink.

Mrs. MINK. Yes. I would like to commend you also and your district and your private community for the marvelous program we have just heard described. I think this is equally as good as the explanation we just received from Mr. Zuck.

I wonder if you could give me the figures on your annual program under the Vocational Education Act.

Mr. ROSS. I can't give you the annual cost because I don't know that. Roughly, we have received about $100,000 funds from VEA. The district has spent approximately $300,000.

Mrs. MINK. Have there been any State funds which supplemented this program?

Mr. ROSS. No.

I would like to point out the tremendous help we have had in the technological know-how from people which can't be measured in dollars and cents.

North American Aviation has a large plant in Downey, and most of our counselors and administrators or teachers have been through that plant, and employees at the administrative level have been through the school, and here sets a school district trying to do advanced education and keep up in the world, and the most advanced technological things in the world are going on in the same town, and there is no interplay. Now we can get help from them, and they come over on call practically any time to help us with problems and machinery and so on.

Mr. HAWKINS. Are you saying in addition to the actual cash which you have put up on a 3 to 1 basis, there is a great amount of local talent and contributions of facilities being used and so forth included in the local effort?

Mr. ROSS. I believe I mentioned there is an estimated $12,000 worth of things that have been donated to the program, but that does not include any technical help or hours of time from technical people.

Mr. HAWKINS. The $300,000 you referred to is with actual outlay by the school district?

Mr. ROSS. Yes. We built two buildings that were not VEA matched, because it wasn't in an area school, and we put equipment into programs that weren't funded by VEA.

Mr. HAWKINS. Why don't you receive any State help? Didn't you say you didn't receive any?

Mr. Ross. We did not receive any State help. We do have ADA.

Mr. HAWKINS. But no vocational education money?

Mr. Ross. No.

Mr. HAWKINS. Thank you.

Mrs. Mink.

Mrs. MINK. You mentioned the difficulty in matching.

If the bill were written so that in order to qualify for new Federal dollars beyond the amount you have received the contribution would be on a 90–10 basis, would this still be a difficulty?

Mr. Ross. That would make it almost a gift, and I think some way we could squeeze out the necessary match funds. We spent a large sum of money all at once. I probably picked some of the most expensive programs because I wanted to see if the district was really interested in developing a vocational education program.

Mr. Ross. We have tried many times to get our vocational education program more realistic, but no one wanted to listen.

Mrs. MINK. Do I understand correctly this $400,000 program largely went to hardware which will not be operating expenses on a continuing basis each year?

Mr. Ross. That's right. It takes money to keep the program running, but that is a smaller amount.

Mrs. MINK. What sort of budget have you programed for next year for this total vocational area?

Mr. Ross. We are still in a state of flux. I will have to give you a guess of about $50,000.

Mrs. MINK. Fifty thousand dollars of local dollars?

Mr. Ross. No. This would be fifty-fifty, $25,000 or $30,000 local and $20,000 VEA.

Mrs. MINK. And you would be able to sustain the current level of services that you have now augmented under the vocational education program?

Mr. Ross. Yes. We will be able to sustain it, but we are a long ways from being where we need to be.

Mrs. MINK. You say you are planning about a $50,000 program. Is this because you suspect that Federal funds will not be available, or because you find difficulty in raising the local matching level?

Mr. Ross. Partly the latter reason, and partly just simply the time of developing new programs. It takes manpower to do it.

There is a problem of requisitioning equipment, installing equipment, changing buildings, and planned curriculums. It is a tremendous program, much larger than we realized, and we are, so to speak, trying to get our breath now so we can start the second leap.

Mrs. MINK. You mentioned 16 new occupational areas. Could I have a listing for those?

Mr. Ross. These were not necessarily occupational areas. These were vocational educational projects. However, I will be happy to tell you what the programs were.

We have a stenotype class which has tripled enrollment from the first year to the second.

We put in our first machine transcription classes. The office machines programs was upgraded a great deal.

We put in a comptometer class which is a satellite program in our business machines class. There are four students in each period, so, we train a total of 24 by running it all day.

Mechanics, machine metals, graphic arts, electricity electronics.

We have asked to put in a general business educational laboratory for our continuation school and that will take a whole family of occupations.

Some that we want to go into as soon as we can are health occupations, medical occupations, food occupations. One of the experimental programs I have had in mind is called facilities care and development class.

For years I have been concerned about the fact there is a lot of custodial grounds and general maintenance work at a school being done and kids weren't involved in it. Yet, eventually they do get into these occupations. We have tried to think of a way to get this program started on a realistic basis.

One problem is you can't have 20 or 25 students in one place working on a lawn or a flower bed.

The same is true of the custodial work. You can't put 20 kids in one room and clean it up. With general maintenance work if you have problems with 20 students painting or doing cement or carpentry work. So, I finally figured a way this could be done.

I would like to try this program, because I don't know of any school that is doing anything like this.

The experience as an assistant principal has been real helpful to point out the need for these programs. You see kids that want to drop out of school. As you sit and talk to them and you know you don't have a program they are interested in, and there is little reason for them to stay in school until you get appropriate educational programs.

Mrs. MINK. Thank you, Mr. Chairman.

Mr. HAWKINS. Thank you, Mr. Ross.

We will get back to the witnesses who wanted to make a brief statement on the subject of NYC versus work-study.

The next one is Mr. Ronald Regan, R-e-g-a-n. He is not an actor.

STATEMENT OF RONALD REGAN, SUPERVISIOR, AGRICULTURAL EDUCATION, LOS ANGELES CITY SCHOOLS, LOS ANGELES, CALIF.

Mr. REGAN. Congressman Hawkins, Mrs. Mink.

I would like to provide my support, if I can, as supervisor of agricultural education, Los Angeles City schools, for work-study.

We have quite an extensive vocational program in Los Angeles City School District in vocational horticultural training. We are training youngsters into the employable areas in this field.

For your interest, this is a job survey of just civil service jobs here in Los Angeles City. Using this as a basis for job opportunities for youngsters we have been able, with the help of the vocational education funds, to expand our vocational program by 300 percent here in the Los Angeles School District in landscape and horticultural vocational training.

We have had extremely good success with Followthrough in the second year of its operation. By next year we will have placement statistics for this information.

Now, running in conjunction with our program we conducted last summer a work-study program for 220 youngsters, and, if I may, I will give you some information on it. I know it is late, and I don't want to take up too much time, but this portion of the Federal act has given us in agricultural education, I think, a chance to participate in one of the finest activities we could have done in our high schools.

We had 220 youngsters working last summer in different job locations under a work-study program.

The primary objective of this project was to provide employment opportunities in the area of landscape and nursery maintenance for those vocational agriculture and horticulture students who needed the earnings to continue in their high school education.

An additional objective of this work-study program was to correlate actual work experience in the area of their vocational training.

A third objective was to provide opportunities for high school students to participate in the world of work. Many of our urban youth do not have the opportunity to obtain part-time employment. The development of work habits, employee-employer relationships, the success of gainful employment are areas of experience needed by the youth of today.

I think this was a key to the success of this program. Out of the 220 students working at job stations only one boy had to be released from this program. They worked 139 hours in a 4-week period and were paid $1.27 an hour.

They worked at 70 different job locations at elementary, junior high, senior high, adult schools, working under the supervision of the gardening staff for the vocational horticulture or agricultural teacher.

I would like to refer you, if I may, to appendix A of this report where we asked in a followup brief evaluation of this project. Some of the statistics were quite interesting.

Item 3, "Have you gained any educational benefit so far on your job assignment?" The response was 115 "Yes," and seven "No." This was a response by the students themselves.

Item 1, "Have you worked at this type of work for a salary, or on a contract basis prior to this work assignment?" Seventy responded "Yes," and 55 "No." So, some had received some work experience, but a large percentage had not.

Item 6, "How do you plan to use the earnings from this work-study project?" Car, 20 of them; education, 36; clothes, 25. Those were the high ones. Investment in new school projects, productice type of nursery, and so on, 16.

It was also interesting in the reaction of parents on appendix B.

Item 1, "Do you feel this is a worthwhile project for your son or daughter to participate in this summer?" Ninety-nine responded "Yes," and none negatively.

"Do you have an understanding of this project," et cetera.

Now, we also tried to present to the parents that the Federal Government was providing the funds through the State and the local school district as indicated in the first paragraph. At your leisure you may wish to look at the other responses.

I might refer you also to how we brought together an advisory group in the last page of this report and the people that advise us on our training program in our schools.

At the present time we also have a work-study program in operation during the school year, and the youngsters work 10 hours a day. One hundred and forty-two youngsters are employed at $1.27 an hour following the same general format as they did during the summer except they are attending full-time school.

Now, that, very briefly, is my pitch for work-study. We have found it to be a very successful program with youngsters and one we certainly would like to continue, unfortunately, with the present lack of funds in this particular area, we will not be able to participate in it this summer.

Thank you, Mr. Hawkins.

(The following information was submitted for the record:)

Interoffice Correspondence, Los Angeles City Schools

To: Ron Regan, Supervisor, Agriculture Education.
From: Ivan Wolfson, Consultant, Agricultural Education.

FINAL HOURLY BREAKDOWN BY SCHOOLS REPORT, WORK STUDY VEA PROJECT 6-1948, JULY-AUGUST 1966

School	Number of students involved	Pay periods—Total hours per school				School total
		01-66	02-66	03-66	04-66	
Canoga Park High	14	54	1,461	1,660	258	3,433
Carson High	17	92	2,013	2,028	314	4,447
Cleveland High	16	76	1,780	1,899	309	4,064
Eagle Rock High	21	137	2,595	2,667	415	5,814
Francis Poly	12	63	1,357	1,357	175	2,904
Fremont High	15	89	1,983	1,983	306	4,078
Gardena High	16	75	1,117	1,117	87	2,973
North Hollywood	28	72	2,380	2,380	255	4,429
San Fernando	31	56	3,420	3,420	516	6,516
Taft	6	14	434	434	46	891
Van Nuys	29	175	3,474	3,474	518	7,890
Washington	15	101	1,909	1,909	298	4,268
Total	[1] 220	1,004	22,878	24,328	3,497	51,707

[1] Maximum employees.

Note: Total hours in project, 54,400; total hours consumed, 51,707.

Division of Secondary Education, Agricultural Education—A Report on a Vocational Education Work-Study: Vocational Horticulture Work-Study, VEA Project 6-1948

I. INTRODUCTION

A proposed Work-Study project under the auspices of the Vocational Education Act of 1963 was implemented by the Los Angeles City School District on July 1, 1966. The provisions of the project provided employment opportunities for vocational students from vocational programs in agricultural education.

The project, No. 6-1948, was a joint venture between the Los Angeles City School District and the State Department of Education, Vocational Education Division.

Students from twelve different high schools participated in the Work-Study project: Canoga Park, Carson, Cleveland, Eagle Rock, Francis Polytechnic, Fremont, Gardena, North Hollywood, San Fernando, Taft, Van Nuys and Washington.

II. OBJECTIVES

The primary objective of this project was to provide employment opportunities in the area of Landscape and Nursery Maintenance for those vocational agriculture and horticulture students who needed the earnings to continue in their high school education.

An additional objective of this Work-Study program was to correlate actual work experience in the area of their vocational training, i.e., landscape and nursery vocational training.

A third objective was to provide opportunities for high school students to participate in the "world of work". Many of our urban youth do not have the opportunity to obtain part-time employment. The development of work-habits, employee-employer relationships, the success of gainful employment are areas of experience needed by the youth of today.

III. SUCCESS OF PROGRAM

A total of 220 vocational agriculture or horticulture students were assigned during this eight week period. The students were assigned a seven hour work day maximum, however, total hours worked did not exceed 139 in a four week pay period. The work stations were all in the area of landscape and nursery maintenance. Students were assigned to school gardeners, nurserymen, or vocational agriculture teachers during this period of time. Direct supervision of the students was provided for by the above personnel. Work stations and the liaison required for providing same was accomplished by the vocational agriculture teacher, or the agricultural education office, $1.27 was the hourly wage.

The work stations were located at over 70 different elementary, junior high, senior high, adult schools, junior colleges and agriculture centers within the Los Angeles City School District. An attempt was made to provide a learning situation as well as a work assignment. Students were assigned a variety of activities including the use, maintenance and operation of powered turf grass equipment.

IV. PROBLEMS ENCOUNTERED

Problems encountered in this project were few. One that did cause a delay in the full implementation of the program was the short lead-time given the school district from the State approval (June 27, 1966), and the commencing date of the project (July 1, 1966). The processing of the required forms and documents to employ this number of students requires considerable lead time.

V. CONCLUSION

The Work-Study project was considered a tremendous success by parents, students, school maintenance personnel, and vocational agriculture teachers.

Four separate surveys were conducted involving student workers, parents, teachers and job supervisors after the first three weeks of operation of the program; and a final survey was conducted involving the students and their parents following the completion date of the project. Please see Appendices A, B, C, D and E for survey and results.

Typical parental comments noted on their reaction sheet appear below:

"I believe it will help to develop his sense of responsibility, also give him a better idea of the value of a dollar."

"Most certainly one of the best things done for students for summer employment—also gives them an idea for future employment."

"He has taken a full interest in this type of work and, as a result, has become interested in our own yard work. He was thrilled with his paycheck and is buying his own school clothes, plus putting some money into a savings account."

"This has been a wonderful project for Mike. He really is enjoying the work. I can tell by the interest he shows at home in the yard that he has benefitted from this program. It has taught him responsibility too."

Comments volunteered by job supervisors (in most cases, school head gardeners) are:

"I think it is a good project, but it depends entirely on the individual student as to whether he learns anything or not."

"Highest accolades are due those who conceived, administered, and executed this project. This will complement the students' academic learning."

"The percentage of students willing to work and learn is very high. The schools have received help when really needed. Project is successful!"

"This is something we have needed for a long time; I would like to see similar projects developed into an apprentice program which should be continuous."

"This type of program is badly needed—would like to see more apprentice programs in all the vocational fields."

Comments received from the teachers are quoted below:

"Very worthwhile program; permits more individual attention. Would like to have each student spend at least two weeks with traveling gardener. Wonderful opportunity for student to have exposure to the 'work-a-day' world."

"For a pilot program, this has gone along in good style."

"The work accomplished and the money earned from what has been the first job for many of these students has been of enormous value."

VI. RECOMMENDATIONS

We recommend the continuance and possible expansion of Work-Study activity.

APPENDIX A

To: Work-Study students.
From: Grant E. Nielson, coordinator.
Subject: Work-study project 6–1948—Summer 1966.

Through the combined efforts of the Los Angeles City Schools, the California State Department of Vocational Education, and the Federal government, you, as a student who has either been enrolled, or intends to enroll in a Vocational Agriculture class next semester, have been assigned to the Work-Study program. I am interested in obtaining your reaction to this program. Therefore, will you please fill in the information below and return to your instructor so that I might summarize? (Please use reverse side of paper if necessary).

Name: ______________________ School: ______________
No. of semesters enrolled in agriculture: ________ Location: ______________
Type of Work: ______________________

1. Have you worked at this type of work for a salary, or a contract basis prior to this work assignment? Yes, 70. No, 55. Explain ______________________

2. Have you done this work at home either for an allowance, or as part of your responsibilities? Yes, 113. No, 12.

3. Have you gained any educational benefit so far on your job assignment? Yes, 115. No, 7. Explain: ______________________

4. Have you found the supervisor assigned you jobs fair to work with? Yes, 123. No, 0.

5. Do you feel this experience will influence your decision as to the type of work you will pursue after graduation from high school? Yes, 88. No, 38. Explain: ______________________

6. How do you plan to use the earnings from this Work-Study project?

Bicycle	2	Recreation	7
Car	20	Car insurance	2
Education	36	Motorcycle	6
Clothes	25	Stock purchase	2
Musical instrument	1	Projects, animal, home, etc	16

Approved: Mr. R. Cooper, Sec. Admin. Coor., 7/18/66.

APPENDIX B

To: Parents of work-study students.
From: Grant E. Nielson, coordinator.
Subject: Work-study VEA project 6–1948—summer, 1966.

Through the combined efforts of the Los Angeles City Schools, the State Department of Vocational Education, and the Federal government, we have in operation this summer a Work-Study program involving $69,088.00 and 54,440 hours of assigned time. Your son or daughter is a part of this federally funded program administered by our local school system.

It is my sincere desire to have your reaction to the questions below so that we might have your opinions as to the effectiveness of this summer program insofar as it has affected you or your child. Please use reverse side of paper if necessary.

1. Do you feel this is a worthwhile project for your son/daughter to participate in this summer? Yes, 99. No, 0. Comments: ______________________

2. Do you have an understanding of this project? Yes, 86. No, 14. Comments: ______________________

3. Do you understand the part the Federal government is playing in this work-study program? Yes, 80. No, 19.

4. Do you understand how the school is participating in this project? Yes, 84. No, 0.

5. How is your son/daughter (underline) reacting to the work in this project? Good, 99. Bad, 0. Indifferent, 0. (underline) Comments: ______________________

(Use back of sheet if necessary.) Please have student return sheet to his instructor or mail directly to me at the address above as soon as possible.

7/19/66.

APPENDIX C

To: Job location supervisors.
From: Grant E. Nielson, coordinator.
Subject: Vocational agriculture work-study project 6–1948—summer 1966.

Through the combined efforts of the Los Angeles City Schools, the California State Department of Vocational Education, and the Federal government, we have been able to incorporate as a part of your gardening work, students who are "learning by doing." In order to determine the effectiveness of this program after 2 to 3 weeks of operation, will you please answer the questionnaire below?

1. Do you feel this is a good activity for students enrolled in Vocational Agriculture? Yes, 31. No, 0. Comments: ______________________
2. Have you found these students cooperative to the work assignments given to them? Yes, 30. No, 1.
3. Have you found the students arriving on time and completing the time assigned in an acceptable manner? Yes, 30. No, 1.
4. Do you feel the students are receiving educational as well as work experience benefits from the assignments you have given them? Yes, 31. No, 0.
5. Do you feel this is a worthwhile project in which the Los Angeles City Schools should participate? Yes, 31. No, 0.
6. Please comment on your working relationship with the teachers assigning students under your jurisdiction. No problems, fine, teachers doing outstanding job, very good, very cooperative, pleasant.
7. Please make a brief statement as to your over-all reaction to this project. Good. Excellent. Let's have more like this; should be continuous.

(Use reverse side of paper if necessary.)

Name: ______________ Location: __________ Date: ______

Approved: Mr. R. Cooper, Sec. Admin. Coor., 7/20/66.

Mr. HAWKINS. Thank you, Mr. Regan.

The next witness is Mr. Elwyn Saferite, dean of Academic Affairs, Special Programs, Cerritos College.

STATEMENT OF ELWYN C. SAFERITE, DEAN, ACADEMIC AFFAIRS, SPECIAL PROGRAMS, CERRITOS COLLEGE, NORWALK, CALIF.

Mr. SAFERITE. Congressman Hawkins, Congresswoman Mink.

It is with pleasure I appear before you to give you brief testimony in regard to this work-study program.

I would like to relate briefly the institution and the social and economic background of the residents of this district which we serve, because I think it has relevancy to my comments.

Cerritos College is in an urban community in the southeast portion of Los Angeles County. We have the same problems as other urban areas. Our's is a low-middle-income group of residents for the most part. A great percentage of them are in the semiskilled and skilled and technical levels. We do have a small percentage that are in the professional occupations, but for the most part, it is the lower-middle-income group.

Our current enrollment is approximately 4,000 full-time students, a total of 10,000 students in an integrated extended day program.

One of the things I think has relevance here, of our 4,000 full-time students, approximately 1,500 of them attend both day and extended day which is indicative of the fact a great many of our students work. So, they get a work schedule that fits around their school schedule.

We are in the second year of a VEA work-study program. Our results last year were very successful.

I will relate briefly the statistics relative to our current project.

We had a summer work-study program in which we had 15 involved. As for the regulations in the act, it was for those students currently enrolled or intended to enroll in the institution, so, approximately 10 of these 15 were graduating high school seniors who had preregistered with us and indicated they would be with us as a full-time student this last September.

It is interesting to note that the 15 who participated in the summer have continued with us up to the present time as full-time students.

In the program last fall we had some 70 students enrolled participating in this program and, incidentally, this represents some—pardon me—we offer some 28 different occupational center areas—not all of these areas were represented by students participating in the work-study. Of the 70 participating last fall 69 completed the semester as full-time students. At the end of the semester one transferred to a transfer program. Currently, we have 80 in the program for this semester, and we have had no drops.

When we relate this to an average of 6 percent drop per semester on full-time students, I think we indicate the importance of this work-study program. I think this is one of the meritorious aspects of this program. If the purpose of this is to encourage youth to identify themselves with realistic projects and to prolong their period of time in formal education so they may enter the world of work at a high school level, then it seems to me this has been tremendously successful from the standpoint of economic income of our group. There are only 11 percent of them that would qualify under EOA, and, incidentally, by the same standards in our district there is about 12 percent. So, this is roughly comparable to that, but by the same token, it has been our experience that 80 percent of our students must work to stay in school full-time.

Now, here are some of the factors. One, from the standpoint of parents, when the youth get through school—we have free public education, they can eat at home and sleep at home, but if they want to go to school the expenses for driving back and forth from school and their meals must be borne by the student and some of these semiadults are assuming some of their adult responsibilities.

Nevertheless, it does require that they have some income. We have a student placement office, and we have had excellent support from business and industry. We have found we have approximately 5 percent of our students in need of jobs on campus. Part of this is because of transportation problems because a majority of the jobs will be from 3 to 8 miles distance, and this involves considerable driving.

Another factor is the incoming students, the freshmen. A great portion of them have such limited job skills that there are little opportunities, and this provides us an opportunity by matching job stations with their occupational objectives for them to get some basic job skills in a realistic work situation according to their education and training in the shops, laboratories and so forth.

So, it has been our experience this has been a gradually rotating thing, and as their job skills came up to a level where they could compete out in the labor market we would be able to make referrals and they could get a job and, consequently, we have very few second-year students involved in this program because they have better part-time, better-paying jobs than we have.

So, I can give testimony to this as being of very definite benefit to this disadvantaged middle class that one of our previous speakers referred to.

I think that gives you a very brief résumé of this, and in the interest of time, I will conclude.

Mr. **Hawkins**. Mrs. Mink.

Mrs. **Mink**. No questions.

Thank you.

Mr. **Hawkins**. Thank you very much, Mr. Saferite.

One other witness who indicated a desire to testify is Mr. Wilbur W. Lorbeer.

STATEMENT OF WILBUR W. LORBEER, PLANNING DIRECTOR, REGIONAL OCCUPATIONAL CENTER, TORRANCE, CALIF.

Mr. **Lorbeer**. I have no prepared statement, but I felt I urgently needed to endorse some of the comments made this morning.

For 15 years I was with the Los Angeles City schools as a specialist in vocational education.

I placed a document on your table and if you will turn to it where it shows the State comparison to local and to Federal financial support you will see estimated percentage for each in the proposed budget of the Southern California Regional Occupational Center.

(The information referred to follows:)

[From the Mar. 15, 1967, interim report of the Southern California Regional Occupational Center]

Financial support 1967–68, Southern California Regional Occupational Center

	Percent
U.S. Office of Education	19.0
Local governing board	68.5
State department of education	12.5

Budget estimate 1967–68

Income:	
Federal	$248,508
State	163,800
Local	887,692
Total	1,300,000
Expenditures:	
Expenses	839,803
Undistributed reserve	360,197
General reserve	100,000
Total	1,300,000

Mr. HAWKINS. For the sake of the record this is a document entitled, "Interim Report of Southern California Regional Occupational Center."

Mr. LORBEER. This particular page, I think, graphically displays what is happening in California as a result of the VEA-63 legislation.

My point in coming before you is to speak emphatically for the need to provide inservice training of teachers. I would endorse the suggestions that its cost be considered to be 90 percent Federal and maybe 10 percent local. If there is anything hard to sell to a board of education and superintendent cutting back their budget it is the expense of inservice training.

I might point out to you a typical situation in education where almost 80 percent of a local school district's budget is spent in salary, but less than 1 percent is allocated in any form for improving the effectiveness of the 80-percent expenditure.

I cite as an example of this the IBM Co. expenditure of approximately $70 million annually and a company policy that each employee must spend a minimum of 2 weeks per year in inservice training, this commitment for improvement is not traditionally carried out in school districts.

I point up the importance of vocational teachers with occupational skills changing drastically each year must be kept up to date in order that these courses are meaningful in preparing students for employment.

Also, the counseling area you are considering is of the utmost importance, but you cannot exclude here a consideration of the work-study appropriation because students, in terms of high school age youth, react to experiences rather than to advice or counseling of any adult who too often is telling them what they should or shouldn't do. I feel it is most important to have the student obtain experiences and then select his educational career as a result of what he has experienced.

I believe also the vocational education programs that we initiate in the future should be different. Possibly 6 hours per day, not just 1 or 2 hours as the traditional concept now is practiced.

Think about the impact of flexible scheduling and the importance of this concept and what it will do to the vocational education programs. I might encourage you to offer inducement to innovative and creative projects experimenting with new organizational patterns.

The Southern California Regional Occupational Center is a project comprising six local school districts in which not one district presently has experienced a leadership roll in the field of vocational education. This organization is a combination of districts now recognizing the need as a result of the impact of the Vocational Education Act of 1963 and I believe this pattern is something to watch in the future.

While employed by the Los Angeles school system, I assisted in conducting an inservice training program for 350 teachers. We employed them at a rate of $4.40 an hour and asking outstanding teachers to sit down and develop the program they felt was needed for improving instruction. This proved to be the best way to do it. They, the teachers, know what they want. They also know what skills and knowledge they themselves will need the most.

I cite an example in the Los Angeles project where there are always a few teachers at the top, recognized experts in their field, and then there are those who most need the inservice training. If you can improve those at the bottom, those at the top must also improve to maintain their established position as being regarded as the best.

Thank you.

Mrs. **Mink**. This chart that you have asked us to look at, is this the budget for this area vocational center?

Mr. **Lorbeer**. It is an estimated budget. I must indicate to you it has not been adopted by the board as yet. We hope it will be adopted sometime in June, but, proportionately, those percentages indicated would remain the same.

Mrs. **Mink**. But none of these moneys indicated on this page related to the Vocational Education Act; all this money, I see from this title page, comes from title III of H.R. 8910.

Mr. **Lorbeer**. This year we are funded under a plain grant, title III, ESEA, to organize this new district, but that will not be true in a month or two, as we have VEA–63 projects pending approval. That is a total budget for the school district. It would be broken down into Federal programs to the percentage indicated.

Mrs. **Mink**. For just the Torrance Unified School District or for the six-school district?

Mr. **Lorbeer**. For the Joint Powers District.

Mrs. **Mink**. Thank you.

Mr. **Hawkins**. Thank you.

I think we have gone through the list of witnesses. I hope we have not overlooked anyone.

At this time I would like to indicate that Dr. Dwight Adams is still with us.

Dr. Adams, would you like to express yourself anyway as representing Los Angeles Trade-Technical College?

STATEMENT OF DR. DWIGHT ADAMS, LOS ANGELES TRADE-TECHNICAL COLLEGE, LOS ANGELES, CALIF.

Dr. **Adams**. Thank you, Mr. Congressman.

It has been a most interesting day to hear all these many aspects of vocational education as presented.

You have heard reference made to Trade-Tech and our leadership in this field of vocational education. Things we have not been doing that perhaps we, too, will have to be giving consideration to would be this work-study program.

I certainly want to thank you for having selected Trade-Tech. It is our pleasure to have this hearing on our campus, and, as you know, always we are most anxious to work with you in any way, and we wish you the best of success on this project that you are involved with.

Mr. **Hawkins**. Thank you.

We certainly wish to express our thanks to you and your courtesies in making this facility available to us.

Dr. Crawford is still with us, and for which we are deeply grateful. It shows the interest and why Los Angeles Trade-Tech is out in front.

That concludes the hearing in Los Angeles. I don't know whether or not we will be meeting in Hawaii next, but you certainly will be invited if we are.

This is the conclusion of the Los Angeles hearings.

(Whereupon, at 4:20 p.m., the hearing was recessed.)

(The following material was submitted for the record:)

Supplementary Material Supplied by the Southern California Industrial Educational Council

Remarks of F. E. Balderston, Chairman of the State Committee on Public Education, to the Civic Seminar, Palm Desert, October 1, 1967

California's State Board of Education felt the need for a long-range look ahead to the future requirements of elementary and secondary education throughout the State. The State Committee on Public Education was formed in April, 1966 to review these long-range requirements and to propose approaches to a permanent system of educational inquiry.

The Committee delivered a progress report on its 1966–67 activities to the State Board's September meeting. The report is entitled "Citizens for the 21st Century". (Copies may be secured from SCPE, Suite 134, Claremont Hotel, Berkeley, California 94705.)

SCPE's report stresses the necessity of a problem-solving education in which students will become prepared to learn on their own as adults in a rapidly changing world. The schools need restructuring and redirection for greater flexibility of organization, curriculum and teacher training. In this way, the schools can meet this obligation to provide the kind of education to fit diverse needs.

SCPE made recommendations to the State Board of Education for greater emphasis on both integration and compensatory education; for establishment of a permanent system of educational inquiry; for a state-wide network of laboratory and demonstration schools so as to accelerate experimentation and innovation in education; for new and more flexible programs of Teacher training; and for ways of acquainting the community at large more fully with the needs and prospects of California education.

Remarks of Carl L. Randolph, Vice President of U.S. Borax and Chemical Corporation, to the Civic Seminar, Palm Desert, October 1, 1967

There is an activity being conducted in the Los Angeles City School System that can have far reaching effects on the solution of the socio-economic problems of the Negro and Mexican-American segments of our community. It is called the Science Center and is intended for elementary school use.

My basic interest in the Science Center program stems from a personal conviction that the ultimate solution to today's social problems will depend to a large degree on the attainment by minorities of full economic equality. This can only be attained through a good or even superior education, preparing the individual for jobs in a technically oriented society.

Some years ago, educators recognized that the decline in the number of high school and college students embarking on scientific careers could be traced to the lack of a sound introduction to science at the elementary school level. Their conclusions were based not only on the fact that many elementary teachers were not fully prepared to teach these subjects, but more significantly on the fact that students lacked the program, materials and related facilities which would allow each child to investigate the physical and biological nature of the world around him.

In 1961, Dr. Robert Purdy, Associate Superintendent of Los Angeles City Schools, became aware of a plan to abandon agricultural centers maintained by the school system, suggested these facilities be used as science centers to accommodate the development of a science program for elementary grades. In 1962, Science Centers began operation. Beginning with a small budget, but with a good deal of imagination, enthusiasm, and initiative, which continues, there have developed today elementary science facilities which are gaining national and international recognition.

Science Centers exist for a simple reason. They are based on the realization that children are scientists by disposition. It is this natural curiosity of children that the personnel and resources of the elementary Science Centers try to cultivate and direct into deeper channels. The Centers house a concentration of effort to enrich every child's understanding of science whether he be the scientist of tomorrow or the citizen who must live in a scientifically oriented world and understand it. These Science Centers train the teacher, provide the material of instruction and focus on the child.

We have prepared some slides showing the Science Center program. We hope they capture our enthusiasm for this program. Our slides will concentrate upon three Centers: (1) Monlux, (2) 42nd Place, and (3) Hammel.

At the beginning of the current school year new and updated elementary science textbooks were distributed to 320,000 students in grades 1–6 in Los Angeles. The form of these textbooks shows consideration for individual experimentation, and thus ties in perfectly with the Science Center concept.

The Science Center program needs $69,000 to purchase the basic science materials to gain the benefit of the new textbooks. The program received but $3,000.00! The $69,000.00 is a one-time cost to develop kits and implement the use of the new basic science textbook series. Future replacement and maintenance will be met by the programs and its personnel. The kits themselves will be used by 450 elementary schools, 13,000 teachers and 320,000 pupils. Over a projected five-year period, some 700,000 students could be working with this project at a cost of less than 10¢ per student.

Although the demands on funds available in the school system budget are heavy, I believe it is shocking that only lipservice is being paid to such a unique and important phase of elementary education. We must encourage children to be at home with modern technology, not intimidated by it. Only by promotion of programs such as that of the Science Centers can this be accomplished.

I urge this group to consider the problem seriously, and to use individual and collective effort to obtain an allocation by the school authorities of the funds necessary to implement this important program.

REMARKS OF DR. JOSEPH E. HARING, OCCIDENTAL COLLEGE ECONOMIST, TO THE CIVIC SEMINAR, PALM DESERT, OCTOBER 1, 1967

Current Programs To Prevent Slums, Riots and Other Poverty Problems Are Planning Failures

A catastrophic lack of planning has created the Watts slums, led to riots, and is now generating new slum areas in Southern California. Many of our tract homes are cheaply constructed and situated in the wrong places. These homes, called "dingbats", are nearly impossible to maintain as residences and have deteriorated rapidly. Isolated from productive services of employment, the delapidated tracts built only a few years ago have been deserted by working people and given over to poor migrants and the unemployable.

No one has developed an effective method of solving the problems that foster in the urban areas of California. We have tried slum clearance, urban renewal, the job corps, a variety of welfare and cash handouts. Nothing has worked.

If California is to correct the social environment which created and fosters poverty, land planners will have to do it. By taking a long view of social needs, land planners are equipped to balance the varied residential, commercial and industrial needs of our society, and thus stabilize living patterns.

Slums need no longer grow. Adequate housing for each family size, income level and job location should and can be constructed. We can no longer afford the luxury of "growing like Topsy".

SEMINAR GROUP II, HUMAN VALUES, PALM DESERT, OCTOBER 2, 1967

MAIN POINTS OF INTEREST DISCUSSED

(1) There is probably a similarity of characteristcs and attitudes among school dropouts and problem people regardless of ethnic or economic background.

(2) LA Sheriff's Department is training deputies realistically to deal with minorities constructively. Department is trying various techniques to communicate to public what it is doing in this regard.

(3) There are important influences such as parts of the newspapers, movies and TV industries that tend to counteract efforts to improve social attitudes.

(4) Cultural deprivation, if it includes attitudes towards society, is found in a large body of people. It is found in the middle and upper economic levels, not just lower.

(5) The values we mean are those which involve the determination of a persons place in life and are not limited to social, economic and intellectual values. The development of a positive self image in each individual is a key objective of community leadership.

(6) The examples set by adults are misleading and confusing to youth trying to find a value system consistent with our society.

(7) Our value systems are being attacked by young people within our own level of society.

(8) Many people have a tenuous hold, at best, on the generally accepted values and thus leaders of systems of values that deviate from accepted values always have a significant number of followers. (Leary, hippies, etc.)

GENERAL AGREEMENTS

(1) Because attitudes must be formed and changed at an early age, the schools are an important force in this area.

(2) Schools must and do react to social conditions. Now schools emphasize respect for law and order and the importance of the family.

(3) Schools do not have the primary responsibility for establishing values. This is still basically a home and church function. Schools do, however, have an important role in teaching values and can change values.

(4) Social attitudes are largely set by peer groups.

(5) Community agencies must assume responsibility for establishing values.

(6) Possibly schools need to give youth room to set its own goals and to tune in so that it might hear youth expressing its needs. Development of self-expression, recognition of achievement and constructive inter-personal relationships are elements of this emphasis.

"AESTHETICS—A NEW DEMAND"

Moderator was Ruth Benell, Pico Rivera Councilwoman, and member of the Los Angeles County Local Formation Commission. Panel was made up of the Honorable Ruth Bard, of the Superior Court, Los Angeles County, and Virginia Gregory, member of the Board of Directors, Child Art Center, San Francisco, and an art teacher at San Ramon Valley High School.

Mrs. Bard discussed a program that was introduced through the Beverly Hills school system, which met with great success. This was a series of nights with performing artists whereby parents and children could spend an evening with an actor, playwright, artist, etc.

The series met with such success and interest, it was decided to organize a series for parents. The high school auditorium was converted into a theater, and parts of plays were attempted first, and finally, entire plays were put on. The project made enough money to support the expenses and pay the cast. It was noted that the actors were not charging full scale. A project similar to this met with failure in another community because the actors would not work under scale. A solution was advanced by Dr. Ronald Hunt that perhaps the scale rate could be paid to the performers, with them, in turn, contributing part of their salary back to the project thereby satisfying Actor's Equity and gaining a tax deduction for themselves.

This particular project in Beverly Hills was started through the schools, but Mrs. Bard suggested that this could be done through the Recreation Department or the Art Commission in Sacramento. She recommended that anyone interested in further details contact Dr. Cordova of the Beverly Hills Board of Education.

Mrs. Virginia Gregory spoke about the International Child Art Center in San Francisco which has come to play an increasingly important role in emphasizing the importance of the arts for children in the cultural activities of the city. Its functions are: to foster worldwide understanding through exchange of child art with other countries; provide art education and research for educators; serve as an educational center for children, as well as parents and teachers, in order to promote the vital role that creativity must play in the development of the child. The child art from their permanent collection is available on a rental basis. Rotating rental shows are available on a yearly basis.

Slides were shown depicting the collection of the children's art.

Mrs. Gregory spoke of her work at the San Ramon Valley High School which is in the field of aesthetic education. With the support of the school's administration, she designed the course, "Our World of the Arts," and taught it last year as a pilot study to fifty students. This year, enrollment increased to 112. The course outline and results have attracted great interest from educators across the nation. It is hoped that this will become an observation center for teacher education, under Title III, and that the plans for the course will be available for adoption by other schools.

In addition to her own facilities at San Ramon, Mrs. Gregory used the facilities of a neighboring city, Walnut Creek, which has done a remarkable job of bringing cultural activities to the community via their civic organization. They have excellent educational facilities, including a theater.

It is interesting to note that aesthetic training of the young is an increasing responsibility of municipal officials. School systems almost totally neglect this aspect of education. At its best, the community would act in conjunction with the school program to develop and extend a cultural activities program for children. There is everything to be gained from such a venture.

Mrs. Gregory suggested that further information be obtained from Dr. Frank Barron, President, Board of Directors; or herself, Secretary, International Child Art Center, 900 N. Point, Ghirardelli Square, San Francisco, California.

COMMUNITY LEADERSHIP

Group C, under the leadership of Dr. Ronald Hunt, focused its attention on Community Leadership. The discussions were keynoted by the Honorable Helen Cobb, Councilman from San Diego; the Honorable Ruth Benell, Councilman from Pico Rivera; and Mr. Manuel Quintero, Trustee, Los Nietos School District. The recorder was Mr. Donald W. Mansfield, City Manager of Camarillo. Miss Nancy J. Hogan, executive secretary to Charles Luckman, transcribed the proceedings.

In summation, the Group's discussions revealed that we are witnessing changing times and attitudes. Apparently everyone is becoming a specialist, and we no longer look at the entire problem—only specific ones. The resulting fractionization of leadership and effort creates gaps in the total effectiveness of service to the public. One speaker focused the Group's attention on the importance of being concerned with individual problems of people who do not fit into the general norm of society, and toward bringing their attitudes and needs into the group picture. Where one has special problems, special efforts must be made to satisfy his needs. An illustration was cited regarding the difficulties encountered in attempting to provide such a program, where the district boundaries encompassed three totally different governmental jurisdictions. Although the district utilized the services of the three agencies to the maximum, it found an effective solution to fractionization by forming a local coordinating council to implement the school district's efforts.

The three basic elements for effective community leadership to implement better understanding between all interested groups are—

Communication.—Many groups face the same problem. By exchanging information and cooperative effort, most areas of difficulty can be more effectively solved.

Leadership.—In order to identify community leadership, there must be greater dialogue between all areas of government and interest groups. Without leadership in local government, we could find that the Federal government may pre-empt the fields of education, selected municipal functions, and many social services.

Awareness.—All jurisdictions, as well as the people as a whole, must work together or face the loss of local autonomy and effectiveness. There must be total involvement at all levels of the community.

In considering the programs in the schools, which will produce the citizens and leaders of tomorrow, one discussion group emphasized greater involvement of business and industry. Whereas, the schools provide counselors, many counselors lack actual business experience; never having worked, only counseled. A more effective program would be the direct exposure of the students to the business and political world where they would meet the people who actually perform the services.

One city, faced with the problem of keeping the children busy, especially during the summer vacation, enlisted the total community to provide work for every student who applied. The youngsters did housework, cut lawns, picked crops, worked for businesses and governmental agencies, and so on. The project was a tremendous success. Over 600 jobs were provided for 500 applicants. Nearly 200 of the jobs were of over 30 days' duration.

In another community, the high school encouraged the students of government classes during an election year to participate in the actual election. The students performed many meaningful tasks for the candidates while experiencing a first-hand education for themselves.

One interesting element of the discussion was that the larger cities felt that there were far too many school districts; whereas, the larger school districts which overslapped several cities experienced difficulty in working effectively with cities of differing policies and programs.

The concluding thoughts were that everyone must have a cooperative attitude and recognize that other people also have problems. We should increase our communications. We must realize that there is a total problem, with the necessity of the total involvement of all concerned, both in and out of government. The development of effective community leadership which identifies with the concept of total involvement should be a goal of the first magnitude.

VOCATIONAL EDUCATION IMPROVEMENT ACT AMENDMENTS OF 1967

FRIDAY, APRIL 28, 1967

General Subcommittee on Education,
House Committee on Education and Labor,
Chicago, Ill.

The subcommittee met at 9:30 a.m., pursuant to notice, in the Little Theater, Museum of Science and Industry, Chicago, Ill., Hon. Roman C. Pucinski presiding.

Present: Representatives Pucinski and Hawkins.

Mr. Pucinski. It is certainly a pleasure to welcome our witnesses and other guests this morning to our hearing on the Vocational Education Improvement Act of 1967. This legislation will expand and improve the Vocational Education Act of 1963. I think it is particularly fitting that we are having this hearing in the Museum of Science and Industry where, as I am sure you all know, the Third Annual Chicago Industrial Education Fair is presently being held. Mr. Hawkins and myself are looking forward to a tour of this fine exhibit while we are in recess between the morning and afternoon sessions.

Also, we have invited a number of students from our vocational and technical schools in Chicago to join us at the beginning of our afternoon session to tell us about their own vocational courses. I believe it will be very interesting to all of us to hear from these youngsters their own views of what they are learning and how they hope to use this knowledge and training.

In opening hearings in Washington earlier this month on this legislation, I said—

> America has become so obsessed with the need for college education that vocational training of millions of youngsters who will never go to college too often is treated like a stepchild.

Three full days of hearings in Washington, with testimony from a broad representation of witnesses, including administration spokesmen, representatives of the American Vocational Association; the American Association of Junior Colleges; school administrators; State vocational education directors; and universities, as well as representatives from the private sector, have only served to strengthen this already firm conviction.

Further, the evidence we have on record confirms my judgment that improving and expanding vocational education is one of the most important issues before this session of the 90th Congress.

I believe that it is imperative that vocational or occupational education becomes a part of the total education system for every individual. Vocational and technical education unfortunately has become isolated from the mainstream of education.

If we are to move ahead in the 20th century as a vital and ever-growing nation, we must reorient our thinking regarding vocational education and its importance to our education process. It is my strong belief that vocational education must become a fundamental part of everyone's education, at all levels.

It seems to me that education has very little meaning for our students today unless it is tied to some realities in terms of the goals that they are seeking. Many youngsters, in order to have the incentive and motivation to stay in school, need an immediate goal—and that is the training for and a place to work when they leave school. This training would also enable many young people to engage in part-time employment while they continue their education.

Accomplishing this will entail a vast expansion in the field of vocational education at the high school level, at the postsecondary level—and, of course, a broad expansion of programs for many, many adults who need retraining or an upgrading of present skills.

We must bring the combined forces of Federal, State, and local government, industry, business and labor to bear on this ever-increasing problem if we are to train young people to fill the increasing demand for skilled workers in industry and the service trades. In this connection, I believe that we must also include the private sector in many fields, and encourage them to devote their imagination as well as dollars to ways to improve our vocational and technical programs to keep them in step with today's technological revolution.

Unless we meet this challenge, we will fail to prepare an ever-increasing number of our young people to take their proper place in their community and become useful, productive citizens.

Unless we meet this challenge, our Nation will lose much of the vital, upward thrust that has made it the greatest and most advanced country in the world.

I am confident that the testimony we will hear today will make a significant contribution to the efforts of this subcommittee to enact legislation that will continue and increase the forward momentum in this very important educational field, and upgrade the status of our vocations as we did, many years ago, our professions.

We were very much impressed by the fact that testimony before this committee indicates that by 1970, which is only some 30 months from now, 9½ million youngsters in America's public high schools will be enrolled in some form of vocational training. In other words, one out of every two youngsters attending school in this country by 1970 will be taking part in some vocational education program. So the needs are tremendous, and certainly the hearings here this morning are, I am sure, going to fortify our own judgment as to the urgent need for expanding our vocational education system.

I am convinced that coming out and hearing the impressions of people who have to live with these problems day in and day out will help us determine the best way to strengthen this legislation. I sometimes despair at the tendency to centralize everything in Washington and get only testimony there, which I don't think is necessarily reflective of the problems.

So we are happy to be here.

I would like to point out as a footnote to our proceedings today that this gavel, with which I opened today's hearings, was presented to me by Dr. Balling in Washington a few weeks ago. It was made by Juan Velazquez of 8819 Houston Avenue, a student at Chicago Vocational High School, and the wood for this gavel came from the old demolished Jones Commercial High School. I am proud of this gavel, and certainly, it is going to play a significant role in these hearings to help us improve the status of vocational education in this country.

I would like to take this opportunity, Dr. Redmond, to thank Dr. Balling for his help in putting together these hearings. You have a fine representative working with us on our hearings and with the Congress on this important legislation.

Dr. Redmond. Thank you.

Mr. Pucinski. And, before I call upon our first witness, I would like to note that there were more of our committee members that were going to be here today. They wanted to be here today and hear this testimony, but they were caught at the last minute in so-called congressional switches having to be made in Washington. But the record of these proceedings will be carefully studied by our entire committee.

Mr. Hawkins.

Mr. Hawkins. At this time, Mr. Chairman, I wish to commend you on your persuasive powers in getting some of us to come out to Chicago to participate in theses hearings. Certainly, it has been a pleasure to participate in these hearings with you, and we know of your great leadership and concern about this problem. I am sure before the day is over we will have an opportunity to see just how much Chicago is going to take away from Los Angeles in terms of the Federal program. Seriously, I know that we share a great concern for this subject, and I am delighted to be present with you in Chicago today.

Mr. Pucinski. Thank you. Now, our first witness this morning is a very distinguished member of the educational community in America, a gentleman who has had a long and illustrious record of contributions to innovated thinking in the field of education. Certainly in the short time that he has been here in Chicago as superintendent of schools he has demonstrated his ability to take on a very tough assignment and get the job done. We are proud to welcome Dr. James F. Redmond, General Superintendent of Schools, Chicago Public Schools, accompanied by Dr. Arthur R. Lehne, Assistant Superintendent, Vocational and Practical Arts, and Dr. Albert A. Briggs, Principal of Dunbar Vocational High School, I believe, one of the largest vocational schools in the country. Gentlemen, we would like to welcome you here this morning to these proceedings, and I know, doctor, that you have a very important meeting later this morning and that you have an important announcement, so we will try to move as rapidly as we can. Your formal statements will go in the record at this point in their entirety, and then you can proceed in any way you wish.

STATEMENT OF JAMES F. REDMOND, GENERAL SUPERINTENDENT OF SCHOOLS, CHICAGO PUBLIC SCHOOLS, CHICAGO, ILL.

Dr. Redmond. Thank you very much, Representative Pucinski and Representative Hawkins. My associates and I are exceedingly pleased to have the opportunity to come before you today to give our reactions to H.R. 8525.

At the outset, I wish to state that the bill takes a long step in the right direction. There is no portion of the bill with which I am in opposition. There are portions, which in my opinion, do not go far enough.

For the past 4 years we have operated under the 1963 Vocational Education Act. Chicago has benefited materially from its provisions as evidenced by the numerous improvements and innovations in the city's vocational program, but there was never enough money to do the job that needs to be done here. All of you know about the strategic importance of Chicago in the Nation's economic life and its desperate need for skilled workers, and all of you are familiar with the social and educational problems that threaten to undermine the future progress of this great metropolis. We are well aware of the fact that our citizens must be better educated and retrained in many instances in order to carry on the work that is to be done here. We cannot do the job without more money, and we cannot do it alone. For these reasons, we welcome the increase in appropriations which H.R. 8525 would make available on a continuing basis.

Chicago is striving to carry out innovative and exemplary programs in vocational education. Of the $30 million proposed for special aid for such programs in H.R. 8525, Chicago could use 25 percent without being extravagant. Such is the need in this great, changing city. I recommend, therefore, doubling the amount mentioned in the bill.

We note, also that the provision for construction and operation of residential schools will reach $100 million per year. In the cities of the United States where living conditions are often minimal and where study conditions scarcely exist, there is a definite need for a controlled environment directed toward an orderly achievement of social and educational goals which are calculated to promote economic competence and good citizenship. We could use several such schools in Chicago.

The section dealing with the establishment of fellowship and exchange programs for vocational education teachers and educators is timely and important. It is my opinion that not enough money has been set up for the purpose. There is currently a decided deficiency of vocational teachers. Based upon the scarcity of qualified vocational teachers in Chicago, it is my feeling that a mammoth effort will of necessity have to be put forth if the vocational programs currently in operation are to be maintained. To improve them and expand them will require even greater effort. It is my belief that greater emphasis should be upon producing teachers rather than administrators. It is the qualified shop and laboratory teacher that is in short supply. I recommend, therefore, that the money for developing teachers and administrators ultimately be raised from $35 million to $70 million and that teacher fellowships as opposed to administrator fellowships be in the ratio of 10 to 1.

In the administration of the act, there should be room for great flexibility because the needs of each community are different. For this reason, local autonomy in the expenditure of money should not be straitjacketed. Neither should the administrative processes be encumbered with excessive forms and reports which tend to build bureaucracy at all levels and actually impede the educative process.

It is appropriate to hold this hearing on the Vocational Education Improvement Act of 1967 on this day in the Museum of Science and Industry where our students have an industrial education exhibit underway. The interrelationship is important. Sponsoring this exhibit is a newly formed organization representing business, industry, schools, and local government. It is a joint undertaking to help build the bridge between education and employment.

I hope that you will have an opportunity to look at this industrial education exhibit which contains over 3,000 entries of industrial arts and vocational drafting projects designed and constructed by students from the 7th through the 12th grades of the Chicago public schools. Through these exhibits and through the opportunity extended here today for the public to meet some of the young men who participated, you can acquire a first-hand idea of what is taking place in shops and drafting rooms of this city.

It would appear appropriate at this time, Mr. Chairman, to tell you about some of our programs of instruction in the Chicago public schools that can benefit through the legislation being considered here today.

In September of 1966, 122,620 pupils were in attendance in our 46 Chicago general high schools and two technical high schools. An additional 14,130 pupils attended nine public vocational high schools, three continuation schools, and one special school. Approximately 10 percent of the pupils in our secondary programs have made a tentative career choice as indicated through interest in attendance in a vocational high school. All of our vocational high schools provide for citywide enrollment. Students travel from all parts of the city to follow through on the kinds of program which they feel best meets their vocational interests. You should also know that we offer vocational programs in our general high schools. Students in their junior and senior years have varied opportunities to prepare for vocational careers. At the present time, these vocational programs in our general high schools are largely centered in the field of distributive education, business education, or office occupations.

During these past 6 months, we have expanded many programs and initiated new ones. For example, we have a health occupations program whereby junior and senior girls from all parts of the city can learn to become practical nurses by spending part of their educational day in a cooperating hospital. This is a good program, and we hope to expand it. We have other girls who are working in home economics related programs. We have boys and girls in industrial cooperative education programs, in cooperative work training programs, in distributive education programs, in office occupation programs, and in interrelated programs. This expansion of vocationally related programs in general high schools opens many opportunities to students and helps to bridge the gap between employment and school. These programs enable students to attend school for a half day and apply what they have learned on a job for the other half of the day.

This committee should also know that we are experimenting with work-study programs for the disadvantaged overage student still at the elementary level. These work-study programs in our educational and vocational guidance centers provide a thrust to the program of instruction. School supervised work programs have not only helped us keep students in school longer but have made it possible for boys and girls who would be on life's sidelines without this help to enter employment when they leave school. These are programs we hope to expand if we can secure teachers, materials, and facilities to make it possible.

In a summary of our vocational programs now in operation in Chicago, I would like to point out that approximately one-third of the boys and girls in our general high schools today are in vocationally oriented programs during their junior and senior year. I do not think this is enough. I think we must find ways to expand programs that develop salable skills for the world of work and provide opportunities in this complex technological age. I hope that we can put more emphasis on the development of attitudes and that we can provide avenues for every boy and girl to go just as far as possible in programs of continuing education. We want to insure that the program of instruction is the best that we can develop through the cooperative endeavors of our schools, the State of Illinois, Federal Government, and industry-community working together as a team.

Let me, in closing, tell you about two new schools that have opened in the past 6 months. One is the Jones Commercial High School, in the loop of the city of Chicago, and the other is the Westingthouse Area Vocational High School on Chicago's West Side.

First, the Jones Commercial High School. This facility, located in the business area of Chicago, is designed to provide a program of instruction for 1,200 young students in the field of office occupations and distributive education. Students attend the school for 2 years. They are known throughout Chicago as Jones girls, which means that they are very special. Until a few weeks ago, when we opened the new school, the capacity was limited to 600 pupils housed in an old, converted elementary school. Now in our new building, we are able to offer more programs and better programs than in the past. Girls learn grooming; they learn how to use office equipment and be productive in an office. They work on the most modern type of equipment. They attain poise and ability. During their senior year, one-half of their day is spent in an office or business and the other half is spent in the school. The office and school work closely together to make sure that the produce is a happy and successful one.

Now, about the Westinghouse Area Vocational High School located on the west side of Chicago. It is a little north of the Lawndale community. This is a school that is housed in a former industrial building and is being remodeled with local, State, and Federal funds provided under the 1963 act. We now occupy 2½ floors in this building with approximately 75,000 square feet on each floor. We are busy remodeling two additional floors which will enable us to offer a broad vocational program by September of this year. It would not have been possible to have gone forward on this program and this school without Federal assistance. Let me point out, too, that our anticipated costs on this building will be less than one-half that of similar facilities being constructed elsewhere.

Now, what makes this school special as an area vocational school? First, we have invited surrounding communities in the Chicago metropolitan area to share this facility with us, to participate in the planning and in the program. Many of our neighboring school districts are unable to offer depth in vocational preparation. We want to work with them and to help them.

In the Westinghouse Area Vocational High School, we have 10 computerized typewriters that we are using to teach 3- and 4-year-old children communication skills. We are operating this program in cooperation with the Cook County Department of Public Aid. These are happy children. They are learning and they are growing. They are going to become good students and make progress when they enter kindegarten and first grade a year or two from now.

In the same building in an area specially zoned, we are providing a literacy program and a vocational program for approximately 150 adults now receiving public aid but who desire to become self-supporting when they have learned those skills which will enable them to do so. This program we hope to double as classrooms and shops become available through our remodeling program. In this same building, we are training skilled craftsmen for the tool and die industry. Over 100 post high school young men are working in a 1-year program, 8 hours a day to acquire those skills which will enable them to become productive from the day they start their work in the tool and die industry. These young men will help to build the strength of the machine industry in this area. We think this program should be expanded, but unfortunately the manpower funds which help support this seem to be limited and directed toward lower skill areas.

During the evening in this same building, we are doing experimental work with our growing packaging industry. All of this is done with the assistance of top management in the packaging industry. These leaders serve in an advisory capacity to us. They help to provide the equipment, the know-how, and the encouragement in building a strong program. It is at this Westinghouse Area Vocational High School that our health occupations program is centered, and that nurse aides and other programs spread throughout the city are coordinated. There are now approximately 900 secondary school students in a number of vocational programs at the area vocational school in occupational fields such as electronics, electricity, appliance repair, visual communications, health occupations, business education, upholstery, carpentry, and automotive trades.

We need the help of the legislation that is under consideration here today to enable us to expand programs both in our general high schools and in our special schools. We need financial aid to help train teachers with new vocational skills and abilities to help us carry out applied research and help us find better ways of reaching pupils and holding them in school longer. We need financial aid to develop new programs through such avenues as career development. We will move forward in this city at this time with programs of instruction that are needed and that will provide a basis for a lifetime of constructive contributions to men and women who are the strength of our city and our Nation.

Mr. Pucinski, it has been a pleasure to be with you today, and I and my two associates here, Dr. Lehne and Dr. Briggs, would be pleased to answer any specific questions you may have, sir.

Mr. PUCINSKI. Dr. Redmond, I want to congratulate you on this statement. It is one of the best statements we have had in this series of hearings because you have zeroed in on the real meaning of this legislation, and your suggestions here have been very good.

We are going to certainly see how we can incorporate them in the legislation. One of the things I am particularly pleased with is your emphasis on the service trades. This country has undergone a great revolution, and I don't think the average American is aware of this.

Ten years ago we were a production-minded country, and 57 percent of our labor force in this country was engaged in production work. In just 10 years, with technology and the various other improvements that have been made, we have become a service industry nation, and today the figures are just reversed; 57 percent of our labor force today is engaged in services. Only 43 percent is in production. And so it is obvious that the great job opportunities of tomorrow are in the service industries. It is very encouraging, and I am sure it should be very encouraging to parents in this city, to know that you and your associates in the school system are aware of this; that you are looking ahead and that you are trying to meet the needs of the job opportunities of tomorrow. I think this is the most significant aspect of this whole program.

Doctor, I want to ask you one question, and it is not related to this bill before us and perhaps you don't wish to comment at this time; but there is a correlation between the two. I have always looked upon the Elementary and Secondary Education Act which we passed a few years ago as sort of complementing what we are doing in this legislation. In ESEA, particularly in title I, we provide substantial funds for compensatory education, and then we try to give the youngster a basis on which to proceed. Then we try to pick him up in vocational education to carry him through and give him the attitude you spoke of here. Now, would you care to comment at this time on the problem that we are now having in the legislation? I know it is a very serious difficulty. There are efforts being made to substitute the present concept of specific authorization for areas of proven need and substitute that with a grant of Federal funds to States to be distributed among the States in a different formula. Have you had a chance to crystallize your thinking on that, or would you rather not comment at this time and see what happens later on?

Dr. REDMOND. No, I would be pleased to comment, Congressman.

Mr. PUCINSKI. I am sure my colleagues in Washington would like to know what your views are on this subject.

Dr. REDMOND. First, the Elementary and Secondary Education Act has been a great help to the schools of the Nation. The application of these funds has enabled school groups to do the things that, for a long time, they have known how to do but could not finance. The criticism of the act, I think, is not well founded. The problems of administration should not be so emphasized as to bury the real worth that this needed money has made possible. The areas of proven need can be interpreted in many ways.

As a school man, I think the whole school system needs help and needs aid. I think this is the first step, and we should not do anything that will destroy the sole concept of the Federal Government's aid to education. I think we should work out our problems rather than destroy this source of help. I would hope that in the long run, and I mean years ahead, we could see some more firm, some broader form, of aid to the localities.

Mr. PUCINSKI. As you know, Doctor, in the ESEA bill before us, in 1969 we have almost tripled title III, and it was my amendment, as a matter of fact, that took it from $115 million to $500 million because of the very point you are making. But I still think we need a special emphasis on title I because this right now is our area of greatest need. The huge, monumental, compensatory education program that we need in these areas of low-income groups, the so-called culture-deprived youngster who has to be brought up to the norm of your whole school system, is as necessary—or more so—today as it was in 1966 and in 1965. In my judgment, to try to alter the formula now before it has had a chance to get off the ground would set the whole educational cycle back.

Dr. REDMOND. This is the point I have made in several public speeches, that in the long run we may want broader help, but let's don't destroy what we have started with, and which is doing so much good for us right now.

Mr. PUCINSKI. Very good. Well, I am happy to get your views on this, because, as you know, we are going to be confronted with this challenge the week after next, and I would say the President in his very strong statement yesterday stated the case clearly. This concept is in some danger right now of being seriously altered in Congress and I agree with the President that to change the basic formula—which has been carefully worked out and nursed through Congress after many, many years of effort—for us now to change this formula I am afraid would seriously endanger the whole concept 2 years from now. So it is very heartening to see an administrator of one of the biggest school systems in the world give his views on this subject.

Dr. REDMOND. May I get another point in, with your permission, Congressman. The programs would be improved considerably if we could get these acts funded early enough for the school systems to know what they could count on in the way of money.

Mr. PUCINSKI. Well, normally Congress is reluctant to engage in these long authorizations. But I do think that there is a great deal of merit in what you are saying, and particularly in the funds through the Appropriations Committee, because I dont think we give enough attention to the fact that you, as administrator, have to have this tremendous lead time. You just don't turn education on and off the way you do a faucet, and I think we realize this, and we are trying to move in that direction.

Dr. REDMOND. You are most understanding and your remarks are so timely. As of this moment, I am not certain as to the exact number of dollars we will have to operate our special summer school program. We are having to go ahead with plans that conceivably could be scuttled at a later date. This is a bad situation because we cannot plan adequately with respect to teacher employment, and besides we run the risk of disappointing teachers, parents, and children at the last minute. Thank you for letting me have that opportunity, sir.

Mr. PUCINSKI. Doctor, you mentioned in the beginning of your statement that we ought to even double—I believe you said double—the money that we are appropriating in this bill. As you know, we are going to have a little problem with some people, in view of the budget, to get even the money that we have in this bill. We are going to have to work out some area, some concept, where we can perhaps assure Congress that we will save money some place else to make up the additional authorization that we have in this bill. Actually, our answer to the Budget Bureau is that the big jump is in 1969, and we are certainly all praying and hoping that the Vietnam war is going to be over by 1969 and we will then be able to use a lot of the funds that we are now using in Vietnam for these domestic needs of America. But would you have any suggestion as to where we might trim other programs? This is kind of an unfair question to ask of you because you don't know the whole picture—but I frankly don't have any suggestion on where we might trim areas in our programs that maybe are not quite as productive as the vocational education program that we have been discussing this morning.

Dr. Redmond. You are so right in saying I don't know the whole picture. I have my problems with a 500-million-dollar budget in Chicago.

Mr. Pucinski. I thought I would give you that outlet. I will tell you one thing. I, personally, speaking for myself, based on what I have been seeing in the Space Agency and the problems that are now coming to light in that agency, I would not be surprised if the congressmen decided to trim that area and divert some of that money to other uses until the people in the Space Agency sort of get their house in order. I think that the situation is very seriously disheveled at this time, and it might be they will not be able to spend the money that they had originally anticipated. I am not too sure that we might not find some funds in that area to divert to vocational education.

Dr. Redmond. And the argument is, of course, remembering that school-children pass this way but once, and programs of 3 or 4 years from now do not help the current generation.

Mr. Hawkins. Dr. Redmond, I would like to commend you on your excellent statement. I think it is one which, as the Chairman indicates, zeroes in on the specific problems. You raised many different questions and I would like to mention, if possible, a few that may be the most significant ones. You have indicated that Chicago is striving to carry out innovative and exemplary programs in vocational education and that of the $30 million proposed for special aid for such programs in H.R. 8525, Chicago could use—I think you used the phrase 25 percent without being extravagant. But stating conversely, in the event we don't get the money, what deficiency are you likely to suffer, that is, assuming we don't move ahead and provide more liberal funding for the program. What would be the social and economic costs to the people of Chicago as well as to people in other areas of the country if we failed to get this additional funding.

Dr. Redmond. May I introduce and ask Dr. Lehne, who is our assistant superintendent for vocational education, to respond to that, please.

Mr. Pucinski. May I interrupt at this point? Dr. Lehne, you have a formal statement.

Dr. Lehne. No, I do not.

Mr. Pucinski. Well, I thought you did. Off the record.

(Whereupon a discussion was had off the record.)

Dr. Lehne. I would answer the question in this way. Representative Hawkins, your colleague in Congress, a very enlightened one, Mrs. Green, made a statement in Oregon the other day about the expenditures of approximately $13,000 for people in the Job Corps. We will need to continue to make this type of expenditure in terms of our commitment in this Nation to train people for the job market. We believe some of that money should be diverted to a similar commitment in the secondary schools, where the work can be accomplished more efficiently and effectively. We can salvage many students and overcome their handicaps at this level by providing the programs that will insure everyone a skill that is useful to himself and to industry by insuring at least a minimal skill. By providing such a program in the secondary schools, we would not really have dropouts in this Nation, but would have people who could make a contribution to themselves and their families upon leaving school. The cost to this Nation of not providing money that is suggested in this bill would be a very great one because we would only be deferring our major costs until later, when they will be much greater.

Mr. HAWKINS. You are saying we would not be economizing by failing to do it, but rather adding to the problems which we have now with us. You also suggested another question that I was going to ask and that is a comparison of this program with the Job Corps. As you know, we have both programs before us to extend the Job Corps or even expand it, as compared with the vocational education programs which will be provided under this bill. Now, assuming that we have the money for one but not both, just which would you support as being the more desirable, or which one do you think would actually provide the greatest return for the money which is expended? I don't know whether, Dr. Redmond, you wish to answer this. It was included in your statement on page 2, but it doesn't make any difference, whichever one of you want to answer. What I am trying to do is get a comparison between the two programs.

Dr. REDMOND. Let me answer it this way. Vocational education should make the Job Corps go out of business eventually, so if I am investing my money, I want to invest it in the program that will do the most good in the long run. What I am trying to say is that the Job Corps may be very much needed as a repair job, but what I am concerned with basically is building a program that will make that unnecessary, so I think I would put first emphasis on the going program.

Mr. HAWKINS. May I also ask this? Inasmuch as you have indicated that a lot more money could be used at this time, would you be in a position to do it at once without any additional planning? Do you think that you would have the teachers to do it? Do you think you would have the State's support as well as the local financial support to move ahead in matching the money? In other words, would it require some additional planning, or can you actually put into operation these programs during this fiscal year where the money is to be made available?

Dr. REDMOND. I don't know whether I could in this fiscal year. Our problem is our budget year which does not coincide with either the school year or the Federal fiscal year. I could in our succeeding budget year, 1968.

Mr. HAWKINS. Now, also, you have spoken about vocational education at the secondary level. Do you have vocational education also at the junior college level?

Dr. REDMOND. The junior college, sir, is no longer a part of our jurisdiction. However, at the junior college level, I am aware of a limited amount of training for saleable skills as Dr. Lehne identified them, but the junior college is no longer a responsibility in Illinois of the local school board.

Mr. HAWKINS. Now, also in the proposed legislation is the concept that perhaps the interest in vocational education should begin at an earlier level, possibly at the junior or high school level, not with the selection of a vocation as such, but certainly the interest should be stimulated. Do you agree with this concept of trying to raise at an earlier school level the interest in vocational education to develop a greater understanding and a desire to go into this field?

Dr. **Redmond.** Very much so.

Mr. **Hawkins.** At what level would you suggest?

Dr. **Redmond.** These are the programs we talk about in our educational and vocational guidance centers, at what in common parlance would be called an elementary level. Each child doesn't fit the same mold, just as none of us is identical, and there are children who are potential dropouts for whom the traditional school pattern is no help at all. We think that with vocational guidance at the upper elementary level and the provision of introductory skill building, these students can be saved for further education and prepared for a suitable place in society. I don't think we can say precisely at what grade level vocational guidance and skill building should begin. Guidance and counseling should begin much earlier than has characterized past procedures and the training should begin in some form as soon as interests and abilities are readily discernable. Dr. Lehne, would you want to indicate what we have been doing in some of these vocational guidance centers?

Dr. **Lehne.** Let me augment that comment of Dr. Redmond. We now have a grant under the ESEA for financing the program of career development at the fifth and seventh grade level. Here we will explore and work with youngsters in terms of looking for the motivation that is so important in propelling youngsters toward a career. We will give them insights into the world of work. With certain youngsters who have had experience with school failure, we find that part-time work-study gives them a tremendous boost not only in terms of their school work but in terms of their attitude and interaction with others. What we are really saying is that the trust and power which comes with vocational programs is really helping people to enter employment at some time, either at the Ph. D. level or the junior college level or the secondary level, and when we do this, then we are on the right track. Education must be better tomorrow than it is today or was yesterday; and under Dr. Redmond's leadership, we have moved in that direction by doing experimental work and finding ways to make our program effective in getting people ready for the tremendous changes that you, Congressman Pucinski, have already pointed out in the technology of our day.

Mr. **Hawkins.** Now, I was very much impressed with your statement concerning the Westinghouse Area Vocational High School and the varied programs that are apparently being sponsored at this school. Let me ask you this. Are these programs supported by various Federal funds; for example, is the MDTA included in some of that activity? What I am concerned about is the problem that we seem to face on the question of getting individuals to go into vocational training rather than drop out of school because of economic reasons. They must have work-study programs to help them. Adults must have some method of financing at least some of the family cost during the time they will be in training. I am wondering if in this particular example that you have cited you have been able to get individuals to go into vocational training based on the concept they would be provided with some type of financial subsistence at the time they are learning.

Dr. **Lehne.** At the Westinghouse School, we have a manpower training program for tool and die makers. These young men have great potential. They are being aided through an allowance through the Federal Government while they are in training. We also have in that same building people who are receiving public aid. Many of them with small children. We have in that school at this time people who are receiving funds from the State of Illinois through the Cook County Department of Public Aid that will make them productive members of society. We are also working with the children of these people in our Headstart program, and we do have a very, very broad program.

Mr. **Hawkins.** With respect to those recipients of public aid, are these individuals compensated beyond their welfare budget for attendance, that is, transportation cost, child care services? In other words, what incentive in addition to the budget would be made available to these individuals in order to stimulate them to get the training?

Dr. **Lehne.** They do get a transportation allowance which other recipients do not get, but I also think the opportunity of their learning vocational skills is a great incentive. There are many people that say that people on public aid do not wish to get off. This is not true. These are people who are anxious to learn and anxious to become productive, and they are interested in their children and the program of their children. We believe at this school we have found a real answer in giving a thrust to the youngsters and in getting these fine adults into productive channels. I think that the opportunity to learn is appreciated.

Dr. **Redmond.** The local commissioner of public aid and I are pretty much agreed. At the present time, our expenditures in schools as compared with public aid are above one-half. We think that working together we could look toward a time when we might reverse that ratio.

Mr. **Pucinski.** That is a very interesting statement, Dr. Redmond. I view you gentlemen in the educational field as really the front line in the war on poverty. If we can help you develop the program that you want to develop, I feel very strongly that we can start looking to a day when the huge sums that we are now spending on the war on poverty—and we are spending over $2 billion a year—we can start cutting back on those funds as your educational facilities become more adept to accept and do the things that now are being done in a broad field in this attack on poverty. There is no question in my mind that the key to getting people out of poverty is education. We here in Chicago, for instance, I think the record will show, have relatively few problems with the native born Chicagoan. The youngster who has gone through our public school system from the kindergarten grade up, that youngster and his parents are working themselves in pretty well in the stream of economy. Our biggest problem, I gather, is the people who migrate here from other parts of the country where their education has been badly neglected in the early levels, and you have this huge job of bringing them up and catching up in a very short period of time. So it seems to me, Doctor, that the point Mr. Hawkins has been making here is that your comments are extremely important to this legislation because—I like the statement you made that if we can get this legislation through, we may very well be looking to the day when we can start phasing out various aspects of the poverty program.

Dr. **Redmond.** This is a new day in the concept of where education takes place. When I started teaching school, the school was pretty narrowly defined. It was the classroom up on the hill. Public education today belongs in the streets, in the neighborhoods, at day time, at night time.

Mr. **Pucinski**. I want to tell you, Dr. Redmond, that Mr. Hawkins and I have sat through many, many hearings, and we have had many witnesses in Washington and around the country, and I think Mr. Hawkins and I agree it is refreshing to hear an educator make that statement. Most educators try to run away from the peripheral problems of education and try to confine themselves very narrowly to the classroom. It is interesting to hear a superintendent of one of the biggest systems in the world recognize the fact that education becomes a community problem. As you say, it's in the streets and in the evening, at all hours; and to that extent, we certainly want to help you all we can do to develop that concept of education.

Dr. **Redmond**. We have a terrific staff in the Chicago public schools, and they are anxious to prove that education can make a difference in a society.

Mr. **Hawkins**. Mr. Chairman, time prohibits me from asking him other questions. I just poin you in commending Dr. Redmond and his staff.

Mr. **Pucinski**. Before you leave, Dr. Redmond—Off the record.

(Whereupon a discussion was had off the record.)

Mr. **Pucinski**. I would like to hear now from Dr. Briggs who is principal of one of the biggest vocational schools in the country. What are some of your practical problems? I mean, what are some of the things that you need? I would like to get some testimony here so we can look at this legislation through the eyes of someone who lives with these problems day in and day out and see whether or not we can perfect the legislation to reflect some of those daily problems you have. So it is good to have you here and share with us some of your day-to-day problems.

Dr. **Briggs**. Well, in keeping with Dr. Redmond's statement about morning, noon, and night, I am principal of a school that operates from 7:30 in the morning until approximately 11 p.m. at night, and we have all kinds of programs for students and for people in the community in conjunction with other agencies in the city. When I took over principalship at Dunbar, I knew we were in the midst of a technological change in industry. In checking how well our graduates were doing and how well they were being placed in industry, I found in certain areas we were doing fine, but in certain others we were not doing so well. For example, in the millinery industry, we were not doing so well in that area, and in some of our newer trades. In checking one of my recent graduating classes, I found that all the trade dressmaking students were being sent to a radio operation, and I wanted to know why. We had trained them for 3 or 4 years in trade dressmaking, and we were not sending them into this area. It was obvious that the rapid technological changes in these industries were taking their toll on some of our shop offerings. We will need a considerable amount of money to change some of the shop offerings that we have been offering for the last 20 years and doing a fine job in turning out good craftsmen. For example, we need to change our print shop which is still using the linotype and other types of printing to the offset press and to the graphic arts, the new graphic arts in communication and visual areas we know exist in this industry. This costs a lot of money to do this. In keeping with Congressman Pucinski's opening statements and Dr. Redmond's remarks about work experience in the various schools for our students, we have opened recently at least four of these work study programs in conjunction with Dr. Lehne's office downtown, and we are giving these youngsters the work experience that we all agree they need before going out. I think our biggest problem in our school I would say will be when we need more teachers, more space, more clerical help. We will need more machinery and newer machinery, and this I would say would be our biggest problem at Dunbar.

Mr. **Pucinski.** Now, as you know, this legislation provides a specific earmarking of funds for training teachers in vocational education. I was very impressed, Dr. Redmond, with your suggested rates of teachers to administrators. I want to thank you for this suggestion. I will try to work it in, in setting up the ratio of 10 to 1 for teachers instead of administrators. The suggestion made by the Office of Education was that we transfer this section to the new title V of the Higher Education Act, which has some provisions for the so-called training of professional teachers. I am opposed to this concept because we have seen that whenever we put vocational education in with the rest of the group, the very sophisticated university community invariably delegates vocational education down to the bottom of the heap, and they give us the scraps and the bones instead of the meat. It seems to me that when we talk about the big breakthrough in vocational education—Dr. Briggs here pointing out his need for teachers, and you, Dr. Redmond, pointing out the need for teachers—this committee would be wise in holding fast to its determination that money be specifically earmarked in this bill for training vocational educational teachers through these fellowship programs you endorsed. Do you get the same feeling, Dr. Redmond, Dr. Lehne, and Dr. Briggs?

Dr. **Redmond.** Well, yes. I think historically, first came Sputnik and then came the great help for training and science teachers. Maybe we don't need to do that forever. Maybe we don't need to make the emphasis on vocational school teachers forever, but we know it is a good way to give a good boost.

Mr. **Pucinski.** So if we had this authorization here specifically earmarked for teachers, Dr. Briggs, you feel you could then start, perhaps closing the gap more effectively?

Dr. **Briggs.** Probably; if we had more money we could probably send these teachers out for retraining and we could provide other classroom help while they were gone, and I think periodically we need to send our vocational teachers out to keep up with industry without them having to do it on their own time or during the summer. They should be able to do it on regular schooltime, and I think this is a very, very serious problem. If we can get more money, we can do this.

Dr. **Redmond.** Industry does this very thing we are talking about. Industry invests money in upgrading its own personnel. We have always been so underfinanced that we have had to offer little encouragement. Well, little encouragement to offer, I should say.

Mr. **Pucinski.** One of the provisions of this bill would permit entering into contracts between private groups including employers, and it would give you an opportunity to accomplish a more comprehensive program of tying in the school with the various employers and employer groups. Do you see any particular merit in this particular provision, either Dr. Briggs or Dr. Lehne?

Dr. **Briggs.** We attempted to do this this year with the airlines, and, of course, we ran into some problems in our own rules, and I think we would love to do this.

Dr. **Lehne.** I think this bill we are discussing today is really enlightened education. The provisions or the methods of financing ways to get into the schools competent new help will be a great salvation for us. There just isn't any doubt in our minds that we are going to have to do this kind of thing. This will help move us in that direction. There are those who say that the effective life of a teacher in a vocational school would be about that of an automobile today. Without retraining, it is obsolete in 4, 5, or 6 years. We need certain things. We need to find a way to build new skills into our people. We need to find ways of attracting into our schools competent people from other fields of learning. We need people who can be trained in vocational programs.

Dr. **Redmond.** Congressman, there isn't a shortage of teachers. There is a shortage of teachers teaching school. We are in a highly competitive market without very much ammunition to fight the battle.

Mr. **Pucinski.** There is where I am going to have my big problem with the administration, but this is not the first time that the administration and I have tangled on education. I remember when we ran extension of the library services program through last year, and—off the record.

(Whereupon a discussion was had off the record.)

Mr. **Pucinski.** You recall when we were going to pay only for those families who have an income under $2,000, and we pointed out to them that a city like Chicago would be tremendously hurt by that formula because we have a lot of families on public aid who receive more than $2,000 a year. So the administration fought all down the line on that, but I am happy to say we won that one.

I am going to have some problems with this legislation because, as you know, the administration has come up with an excellent suggestion for expanding section 4(c) of the act, but it just doesn't go far enough. I mean, all the administration would like to do is settle for section 2 of this bill, the provision—I should say section 3, which is to set up some $30 million for innovative demonstration projects. Well, that is not even touching the surface adequately. Spread among 50 States, $30 million really wouldn't do much in my judgment. So I am very happy to have your support, because you fortify my position at the practical level, that the needs of vocational education in this country are so huge that even if this bill were to go through, and be fully funded, we are still only scratching the surface. That is why I am very happy to have your testimony because it is one thing for me to say these things, but it is another thing for a respected educator like yourself to say these things and fortify our position.

Mr. **Hawkins.** Mr. Chairman, could I have a final crack at Dr. Redmond? I would like to have him expand on the statement he made. I think you said there is not a shortage of teachers, but merely a shortage of teachers in the classroom. I was wondering whether or not you might expand on that. How could we get them into the classroom, and also expand on the problem that does exist in some areas, and that is, getting these teachers to go into the slum ghettos?

Dr. **Redmond.** I may sound like Johnnie One Note, but it's dollars, not combat pay, if you please, but it's dollars to first make attractive the salary schedule and secondly to make the working conditions satisfactory. You identified the ghetto school. I am convinced that if we can provide such simple things as well-protected parking lots and adequate schools with decent furnishings, we could be competitive. For example, in the field of home economics, teachers who now can get their home economics training as teachers can find much better salary conditions in industry with better equipped and nicer working conditions. I am not talking just about the woman who is married and raising a family, but I am talking about the people who are trained, who are psychologically and emotionally equipped for working with children, but who cannot in their own mind feel they can sacrifice the dollars for their family. I may sound like a dollar sign is all that I know, but it is so far ahead of whatever is in second place——

Mr. **Hawkins.** Thank you very much.

Mr. **Pucinski.** One final question. I have been assuming we will be successful in funding the residential vocational education school concept. Would you want to give us any hint on where you might develop a residential skill center here in Chicago?

Dr. **Redmond.** I have learned that you don't hint like that without causing a lot of commotion in the community. You better have a full-blown plan first.

Mr. **Pucinski.** But there is no question if the funds do become available to give you that kind of assistance, you could move expeditiously to set up a school center in the city?

Dr. **Redmond.** This is true, sir.

Mr. **Pucinski.** Gentlemen, do you have anything to add that we haven't covered?

Dr. **Lehne.** I appreciated being here, and there isn't anything I can add to what the general superintendent has already testified.

Dr. **Briggs.** I have nothing further, and thank you for inviting me.

Mr. **Pucinski.** We are grateful to you for your very significant contribution this morning. I am particularly pleased, Dr. Redmond, to see that there is an attitude here of recognizing the need for improving our whole vocational educational system. It has not always been true in the country, and even in the Chicago schools. I notice you have a long-range plan, you have a comprehensive high school concept where you want to merge the basic studies with vocational education. I don't know whether you are going to succeed in that or not, but at least it indicates that we are now starting to zero in on the real core of the problem.

One of the things that amazes me is that when I go across the country and talk to people in the street, the people who pay the bill—the citizen—about vocational education and what we are trying to do with this bill, I would say in 99 out of 100 cases invariably they say, "I have been saying that right along." In other words, I think the average parent in this country—the man who works in the factory, the man who is a craftsman, a tradesman, the skilled mechanic—I think that parent has been saying for a long time that we ought to have more emphasis in providing opportunities for the kid who doesn't want to or can't go to college, but yet who wants to get into one of the good paying trades or crafts or skills. To that extent, this legislation has great support among the rank and file, the man on the street. Your testimony only fortifies that belief, Doctor, and we are grateful to your coming here and taking time out from your busy schedule.

Dr. REDMOND. It has been pleasant. Thank you very much.

Mr. PUCINSKI. I would like the record to show that we have in the audience today an old friend of mine, a man who has played an important role in my own career development, my former assistant principal of the Wells High School, Dr. Lubera, who is now assistant superintendent of our whole school system here. I just want you to know, Dr. Redmond, that you have spent the last hour and a half with a fellow who has been a product of the Chicago public school system, and a man who helped guide that career along. Dr. Lubera is in the audience today, and I want to thank you, Dr. Lubera.

Dr. REDMOND. It's nice you would recognize my associate, sir. Thank you.

Mr. PUCINSKI. Thank you. Our next witness is Mr. John A. Beaumont, the director of vocational and technical education of the State Board of Vocational Education and Rehabilitation.

Mr. Beaumont, will you please take the witness stand? Do you have a prepared statement, sir?

STATEMENT OF JOHN A. BEAUMONT, DIRECTOR, VOCATIONAL AND TECHNICAL EDUCATION, STATE BOARD OF VOCATIONAL EDUCATION AND REHABILITATION, SPRINGFIELD, ILL.

Mr. BEAUMONT. Yes, I do.

Mr. PUCINSKI. Thank you, Why don't you read your statement, and we will get down to the questioning.

Mr. BEAUMONT. My name is John A. Beaumont. I serve as director of the Vocational and Technical Education Division of the Illinois Board of Vocational Education and Rehabilitation.

I am pleased to have this opportunity to present testimony on the Vocational Education Improvement Act of 1967 before the General Education Subcommittee of the House Committee on Education and Labor.

The State of Illinois is currently making great strides in the development of vocational and technical education, which development is due in large measure to the great opportunities which have been made available through the Vocational Education Act of 1963.

Secondary schools are joining forces to establish area vocational centers which provide broader vocational opportunities both for rural youth and for youth in urban centers. This development is based on a greater concern for those youth who do not plan to enter college, and particularly for those youth who have tended to drop out of school due to the failure of the secondary school curriculum to provide motivation through realistic curricula.

A tremendous junior college development is taking place in Illinois. It is estimated that there will be 40 junior colleges in Illinois within the next few years. The board of vocational education and rehabilitation has instituted a program which is resulting in vocational and technical programs which account for 35 to 40 percent of the offerings of these junior colleges. In fact, the first five junior colleges which have been approved for State building funds are using a substantial portion of these funds to build facilities for vocational and technical education.

The important contribution of H.R. 8525 will be that it will provide funds and other services that will be desperately needed in Illinois during this period of rapid development of vocational and technical education.

Currently, we have a number of experimental programs underway particularly designed for disadvantaged youth. Funds available in section 3 would enable Illinois to undertake a very innovative program which is in the planning stages in Chicago. This program envisions the establishment of a career development center which would provide new and different curricula to be offered in flexible module scheduling designed to meet individual student needs.

This week, legislation has been introduced in the Illinois Legislature to provide for the establishment of a vocational institute in the East St. Louis area which has been the center of difficult manpower and educational problems in Illinois. Sections 3, 4, and 5 would offer opportunities to extend plans for this proposed development.

Section 6 would help to solve a pressing problem; namely, screening competent professional personnel. Plans are being developed to establish more extensive teacher-training opportunities in several Illinois institutions of higher education. This section would spur the initiation of these plans.

The board of vocational education and rehabilitation has given top priority to the health occupations. The increase in funds for practical nurse training would be most helpful in extending these programs in the junior colleges where extensive programs for education in a wide variety of health occupations are being established.

Mr. Chairman, we are proud that an Illinois Congressman is taking the lead in introducing legislation that will enable us to serve Illinois youth and adults more effectively in providing wider opportunities for occupational development. This proposed legislation will not only serve the educational and social needs of our citizens but will also bring greater economic development to Illinois.

Mr. PUCINSKI. Thank you very much, Mr. Beaumont, for your fine statement. I wonder if you would care to comment on the concept that many of us in Congress—I, in particular—have been pushing hard on the vocational education program. We are the most mobile nation in the world; no other people in the world move as often as our own American people. One out of every five families in this country moves every year from one locality to another, so it seems to me that when we train a young man for a career or a craft or a skill or a trade here in this city, we are really helping the whole country because the chances are one to five that the young man we are training in Chicago today will establish himself in another community or even in another State. So many people have asked, "Why is this necessarily a Federal problem? Why don't you let the local community handle it?" Our answer has been, "On the one hand the local communities don't really have the resources, and even the States don't have the resources. On the other hand, this is, to a great extent, a national problem. If we help prepare a youngster here in Chicago, most are most probably going to relieve another community at some future date of a problem that it would otherwise have, and the same thing is true with some other communities. For instance, if 30 years ago we developed an extensive training program in some of our Southern States from which a good deal of our population is migrating today and they came to Chicago prepared to join the industrial community, our problems would be a shadow of what they really are today." Do you find any merit in this concept?

Mr. Beaumont. Mr. Chairman, very much so. As an educator, of course, I like to look at the social side of a problem, but the economic value of vocational education has not even begun to be explored. Today we have a situation where investment is made because of capable minds, not because of strong backs; and we have certain situations in Illinois where we don't have enough capable, well-trained minds. In Illinois, we have this situation in such areas as transportation, water, power, finances, and markets, and yet we can't move forward until more people are trained to meet the demands that industry is making at the present time. Whether we do it or some other State does it, this all results to the benefit of our Nation because where we have trained minds and economic development, the Nation benefits from the social goals and gains that we achieve; but certainly, empty stomachs, discontent, and despair don't build the kind of a nation that we are trying to build in our country.

Mr. Pucinski. Would you tell us something about the work study program in Illinois? What success are you having with them, and if you are not having success, what is the problem?

Mr. Beaumont. Well, we feel that we have had considerable success with work-study programs. They have helped many youth, and where we see the work-study program moving particularly is in our downstate rural areas. Not that we haven't done a great deal in Chicago, but there is no other opportunity in some of the downstate rural areas. You don't have economic opportunities for Youth Corps programs in the large rural areas. We have been able to administer the work study program in such a way that we have been able to penetrate even some of the smallest communities in the State with these educational programs to enable these youth to remain in school and benefit from this kind of opportunity. The superintendent at Chester called me the other day to tell me about a group of boys in a building trades program in Chester and how it would be helpful to these boys if we could, through a summer work study program, do something to help them to remain in school to get some experiences in the school building of a nature that would be very significant to them; and, of course, we are moving to help him put this program in operation because the funds will be available until the first of September; but under the present situation, we will have no funds in the next year for this kind of activity.

Mr. Pucinski. In this bill, we propose and specifically earmark $30 million for work study programs. Under the present bill, the work study programs and the residential skill centers are lumped into one package, and the Commissioner of Education decides which way he wants to go; but we feel the work-study program has had greatest success in many parts of the country, and I am very happy to hear you emphasize the success of this program in rural areas. So often in Congress our colleagues look at these programs as big city programs. They don't realize that a tremendous amount of this help is going into rural areas where the need is the greatest because the need for farm help has been diminishing at such a fantastic rate. Many of these people don't want to leave their home State, so we are trying to retrain them and find work-study programs for them during the training process. Now, do you find merit in specifically earmarking these funds for work-study? Do you think that this will give you a little more facility for planning your programs and give you a little more leadtime in effectively carrying these programs out?

Mr. BEAUMONT. Yes, Mr. Chairman. We are quite disturbed about the lack of funding in the proposal for this next year in the area of work-study because we have developed a feeling and an understanding and a desire for this kind of activity; and even when it shifted from 100 percent to 75/25, the schools were picking up the 25 percent and were moving forward. We didn't know initially whether they would. But these rural schools with very limited funds moved in and picked up the 25 percent because they saw what help it was giving to these children who needed help to enable them to stay in school and pursue their work; and we are quite disturbed because now we have to tell these people, "It is no more. We are not going to move this way." This causes misunderstanding because this program has been administered with practically no cost to the State, Mr. Chairman. The local schools have provided the matching funds totally out of their own budgets.

Mr. PUCINSKI. Would you want to express an estimation of or make a comparison between the effectiveness of the concept of the work-study program such as we are discussing here, and the Neighborhood Youth Corps program under the Office of Economic Opportunity? Do you think that you people, by tying this program to the schools, can do a more effective job of work-study programs, or do you think the Neighborhood Youth Corps can become more effective? Would you have an opinion?

Mr. BEAUMONT. I would hesitate to compare, but I would say we can administer this program with practically no cost. We can reach children from the city of Chicago to the smallest crossroads in the State without any problem at all because the school exists there, and we have more and more schools interested in such a program. We are developing these programs that penetrate right into the smallest communities in the State so that we are reaching a total cross section of these youths. Now, we have also instituted in this State through the Superintendent of Public Instruction, a study of reasons for the dropouts of the last 4 years. The county superintendents have been charged with accumulating this information. The State superintendent told me yesterday that 70,000 returns have already been received. Now we are beginning to learn who those young people are; and I believe the youth corps is trying to reach all of them so we would probably be in a position to move in working with young people who have left school which is, I think, the great contribution that the Youth Corps has made, that the schools have failed, as I would freely admit.

Mr. PUCINSKI. With a more effective work-study program, do you think you really could lower the student dropout rate?

Mr. BEAUMONT. Yes, but I am also trying to find a way to reach those who have dropped out because there is nothing more pathetic in this world than a person without an education who is boxed in for years.

Mr. PUCINSKI. Will you describe for us one of your work-study programs, one that comes to mind?

Mr. **Beaumont**. One of the most significant was here in Chicago where we set in motion a work-study program to serve over age elementary school youth. These youths were enrolled in vocational programs in the guidance centers that Dr. Redmond established; and in order to keep those youngsters in school, we were able, with work-study funds, to put these youngsters in private agencies. Not only were they able to keep in school, but they were able to get some experience which, in a sense, enriched the work that they received in school in various vocational areas, and we are now moving to do this throughout the State without work-study funds. We feel this is significant. We have a series of meetings set up in the State to administer this program through administrators throughout the State to show them how in Chicago we were able to take these 15-, 16-, and 17-year-old youths who, for the most part, were in elementary school.

Mr. **Pucinski**. Some people have criticized some aspects of the Neighborhood Youth Corps. Would you say that there is any of this aspect in the work-study programs that you tried to administer, tying very closely to the school?

Mr. **Beaumont**. I would say from the records that come to my desk, Mr. Chairman, there is very little evidence of that. I wouldn't want to say there wasn't any since it just wouldn't be true. But we are trying to administer it to the effect that these young people are doing something worthwhile. They are earning their money; and in earning this money, they are making a contribution to some public agency that would not otherwise be served.

Mr. **Pucinski**. You said you are going to run out of funds by September 1. If we were successful in changing the formula by reducing or eliminating the State matching requirement, what effect would this have on your ability to develop charter more programs and more effective programs?

Mr. **Beaumont**. It would have a tremendous effect because the amount was so great in Chicago that they were not able to continue with this 75/25 percent to any great extent. When you get into large numbers of children, you run into larger sums. In a small school where we have six, eight, or 10 youngsters in a program of this nature, it is not a significant amount of money; and I am sure that in Chicago it would be of a tremendous help because we have had hundreds of youngsters in Chicago on this program.

Mr. **Pucinski**. Have you had any chance to follow through to see what happens to youngsters who have been exposed to work-study programs? Did you have any surveys or studies made along the way to see what happens to these youngsters? Where do they wind up, what kind of jobs do they find? Is there any evidence that they have a better job opportunity than they would had they not been exposed to this?

Mr. **Beaumont**. Yes, there is. The one program where we probably have more information than the others is this one in Chicago, and we have had young people through this kind of program accepted for employment. These young people would not have been accepted for employment in another situation because they would not have even been welcomed for an interview. You take a youngster who doesn't have a grade school diploma and you try to find out how he gets an interview for a job, but you put him in a work-study program in a hospital, and the hospital administrators find that he can deliver in spite of the fact that he doesn't have the education that they normally would require, and they have retained these youngsters. We have had youngsters, Mr. Chairman (and it has been reported to me), who have been the first individuals in three generations in their family to draw a paycheck.

Mr. PUCINSKI. Mr. Beaumont, this is a tremendously important point that you are making. I am sure this is the point we are going to try and carry to our colleagues on the floor when the bill comes up for final action. We have had many people, well-meaning people, who have said, "How can we have 3½, 4, 5 million people unemployed in America, and how can we have some 30 million families in this country earning under $3,000 a year when we are in our 6th and 7th year of continuous prosperity," and many well-meaning Americans ask this question in good faith. I do not challenge their sincerity, but they just don't understand the very point you are making, that a vast number of young people cannot get jobs, and it is rather ironic we are the only country in the world that has this high rate of unemployment among their young people. 25 percent of our unemployed are in the category of 18 to 21. No other nation in the world, even the newly emerging nations have this problem; and so many people say, "Why is this?" I think you put your finger on it. Many of these people just don't have any experience at being interviewed for a job, and I think this is the real power of the work-study program. That is why we feel so strongly that it should be separately identified and that it should be earmarked specifically as such and funds should be appropriated specifically for this purpose. I think we can open up job opportunities and take vast numbers of young people off the unemployed rolls through a specific development of this particular program. I am grateful to you for the valuable mention you have made of these facts. People ask, "Why do you hold hearings on legislation?" Well, the value of these hearings is to get testimony from people like yourself who, from experience, can give the answer to some of these problems that baffle us in Congress.

Mr. BEAUMONT. Well, Mr. Chairman, probably the most needed thing among the group of young people in our Nation about whom we speak is the opportunity to do something productive: and in a society of this nature, this is quite difficult. In a rural society, it is not difficult: but in the kind of society we live in, it is very difficult to take these young people and give them the opportunity to do something productive. Why is this so essential? Because so many of these young people just do not fit the institutional education, and we have been so concerned with this as an institution that we have failed to realize that the learning in society is so much broader than the institution we call education; and we have, through regulation, laws, and through screening processes and everything else, made it practically impossible for these young people to get the things they need most, which is an opportunity to do something.

Mr. PUCINSKI. I think this is a very important observation. You know, we have people today who see on television a demonstration here or a group of college youth doing something silly there, and there is a tendency to judge this whole generation as being listless and without objectives. Well, to those people, I invite them to come into my office and see the hundreds of applications that we have from young people who want summer jobs, young people attending college trying to get some productive work during the summer to pay their way through college, young people who want to work. There is no question that this generation is anxious to assume its responsibility; and I think this work-study program is one avenue where we can make this easier for them.

Mr. HAWKINS. Mr. Beaumont, I assume that since 1963, the enrollment in vocational and technical education has increased dramatically in Illinois, has it not?

Mr. BEAUMONT. Yes, it has. I have an annual report here. I think I could tell you how much. But one of the points you made or, I believe, the Chairman made, or Dr. Redmond, was the fact that you don't move education as rapidly as you would like to. Illinois has been without institutions to provide the educational type. Now, I think that in this sense we have not had a junior college movement until recently, until the last session of the legislature. The senior college movement was set in order. There was really no place in this State to make a real impact on technical and subprofessional training. At the secondary level, as you may know, this area of the country has been a strong center of local economy and local rights, and we recognize that as being important; but this does not lead to centers which provide training for young people. Last evening I was at Sterling, Ill., where the school board, superintendents, and their wives were present for dinner. Some 200 people from about 13 different school boards from local small areas were there. They had cooperated together to build there—with some help from our office—an area vocational center and are moving young people into that center. They started last year without any bricks and mortar, and the major school in the center gave them some opportunities. They now have over 450 enrolled for next year when the center will be opened, and that is over half of its potential enrollment. It still isn't big enough but what I am saying is that we are finally beginning to get these people to cooperate in such a way that the kind of development that I believe Congress anticipated can take place, but we have to get these people to cooperate. We have about 10 of these operations underway in the State now. As I said in my statement, legislation for the first vocational institute that has ever been proposed in Illinois has been introduced. The Governor wants very much to establish a State vocational institute where in a locality I am sure the Chairman knows we have had tremendous problems for years.

Mr. HAWKINS. You have State support for vocational education, have you not?

Mr. BEAUMONT. Yes, sir.

Mr. HAWKINS. Is that based on the ratio of State support to local school districts?

Mr. BEAUMONT. No, it is not.

Mr. HAWKINS. Has it been increasing or decreasing?

Mr. BEAUMONT. It was increased in the last session of the legislature, and we have asked for an increase in this session of the legislature. Now, to what extent the legislature will respond, at the moment I am not in a position to say; but we have asked for a very substantial increase. We have had a four to five thousand increase in enrollment between 1965 and 1966.

Mr. HAWKINS. I was merely raising the question because I have found that in some States, particularly my own, California, as the

Federal help has increased, there has been a tendency for some of these States, including my own, as I say, to anticipate the increase and to either remain static or actually to reduce its support so that the local school districts have been left in some instances in a deplorable financial condition in that they are not able to increase their support. I understand from the statements you have just made, this is not so in Illinois, that the State actually is increasing its support. That is my understanding.

Mr. **Beaumont.** Yes, the State increased its support in the last biennium, and we have asked for tremendous increases this time.

Mr. **Hawkins.** So it would appear that the Federal help since 1963 has resulted in stimulating the State rather than, let's say, causing the State to decrease its support?

Mr. **Beaumont.** Yes, sir; that has been true. The State support in 1963 was $2,869,129. In 1966 it was $4,518,666.

Mr. **Hawkins.** That is a very dramatic difference than what is happening in some of the States, particularly my own. Thank you.

Mr. **Pucinski.** Mr. Beaumont, along the lines on which you have just testified, if we were to reduce a State maximum requirement from the present 25 to 10 percent, and you were to continue to increase your State allocations, obviously it would mean a much larger participation of youngsters in the work-study program.

Mr. **Beaumont.** In the work-study programs, yes.

Mr. **Pucinski.** One of the problems we have had in other States, and I am sure this is true in Illinois, is the 25 percent matching has, to a certain extent, curtailed the operation. The demand is there, but the State has not been able to come up with a 25 percent matching.

Mr. **Beaumont.** Yes, that is true, and particularly, as I said, in Chicago.

Mr. **Pucinski.** We are grateful to you for your testimony, and I am sure we will try to incorporate some of these views into the arguments for the legislation. I want to congratulate you on the good job you are doing here in vocational education.

Mr. **Beaumont.** Thank you, Mr. Chairman. We are trying to use more of a rifle than a shotgun approach to put things where we can see results, and this junior college movement is really a most exciting movement in that respect.

Mr. **Pucinski.** One final question. We have been thinking in terms—at least I have been thinking in terms—of making funds available in the form of assistance to each State to set up at least one residential or vocational school center. You are talking about the development in East St. Louis and about a State school center. Is this the same thing as we were talking about at the Federal level?

Mr. Beaumont. This is not a residential school in East St. Louis.

Mr. **Pucinski.** Would you care to express an opinion as to whether or not such a state residential skill center—I am not quite sure where it would be located—would provide facilities for perhaps 3,000 youngsters in that vicinity? Do you think we could do a more effective job with an operation like that than we do now with some of the Job Corps programs?

Mr. **Beaumont.** I am sure in Illinois, Mr. Chairman, that with a residential center geared to the needs of certain very worthwhile segments of our youth population it would help us meet some of the problems that we have today. For instance, the dropout study being made by the superintendent of public instruction shows us some things that we could do. We have this large group of young people who don't have a place in our night schools and they don't have a place in our junior colleges. There is really no place they belong. As I have said to many groups, the educational bus, using analogy, does not stop on the corner where they are standing; and this would open up a totally new kind of opportunity for a group of young people who are at the moment "bound in" for their work life without opportunity.

Mr. **Pucinski.** We need about $200 million. We are estimating about $4 million per State in Federal aid and the States to pick up the difference, and I must confess to you I am not sure where we are going to find it. But we are going to look real hard to see if we can't help each State develop at least one of these residential skill centers to give you educators a chance to see if you can do something for the very person you described now for whom the bus doesn't stop at his corner, and that is a very fine way of putting it.

Mr. **Beaumont.** To me, it is the fact of education. He is just on the corner where the bus doesn't stop; and as our State superintendent, Mr. Ray Page, reported on the dropout study at the Sterling meeting last night, he was getting some interesting reports, including one from a boy in Vietnam. The questionnaire had followed him there. And his last words as to why he dropped out of school: "It didn't seem to him that anybody cared."

Mr. **Pucinski.** And he has probably got a good point. Tell me, this study that you speak of, is this completed now?

Mr. **Beaumont.** No, it is in process. First, we found out who they were and now we are trying to find out why they dropped out.

Mr. **Pucinski.** How many are you contacting?

Mr. **Beaumont.** So far, they have replies from 70,000.

Mr. **Pucinski.** How soon do you think you will have this thing wrapped up?

Mr. **Beaumont.** We are not sure.

Mr. **Pucinski.** Well, it would certainly help our thinking; and I would think a study like this would have a tremendous impact on the thinking of Congress in terms of trying to find solutions to our problem, so I would invite you to mail us your report as soon as it becomes available.

Mr. **Beaumont.** It has shaken up a lot of communities when we have identified the number of dropouts they have. I was at a meeting the other day with a group of industrialists, one from a northwestern Illinois city. He said, "I never knew we had any dropouts in the last 4 years." Well, they had a few hundred dropouts from their high school, and it really has shaken up a lot of people; and now they realize there are dropouts.

Mr. **Pucinski.** Who is financing your study?

Mr. **Beaumont.** The superintendent's office. I know he is doing it. Whether he has any outside funds in it or not, I am not sure.

Mr. **Pucinski.** Well, we are grateful to you for taking time out to be with us today. Thank you for making the trip up here to Chicago. You have been extremely helpful, and we hope you will convey our best wishes to the State superintendent, and tell him we regret the fact he couldn't be here. He had a conflict in schedules, I know, but I am most grateful for your testimony here this morning.

Mr. **Beaumont.** Thank you.

Mr. **Pucinski.** Our next witness is Carl Thornblad, Executive Secretary of the Great Cities Research Council. Mr. Thornblad is one of our most knowledgeable men on the problem of education in the big cities. Carl, we are happy to have you here. I understand that you have some—I know you have some very interesting reports and statistics that we ought to have in this record because of the facts that they contain; and I wonder if you would like to describe some of those reports, and we will put them in the record.

STATEMENT OF CARL E. THORNBLAD, RESEARCH COORDINATOR, RESEARCH COUNCIL OF THE GREAT CITIES PROGRAM FOR SCHOOL IMPROVEMENT, CHICAGO, ILL.

Mr. **Thornblad.** Yes, sir, I am Executive Secretary of the Research Council of the Great Cities Program for School Improvement. I am here, not to represent the cities, but merely to report on some of their activities. If I may, I would like to read a list of the cities so that you may have an idea of our 16 member cities. Baltimore, Boston, Buffalo, Chicago, Cleveland, Detroit, Los Angeles, Memphis, Milwaukee, New York, Philadelphia, Pittsburgh, St. Louis, San Diego, San Francisco, and Washington, D.C.

Mr. **Pucinski.** What is the total high school population of those cities? Do you know off hand?

Mr. **Thornblad.** The high school population I would estimate roughly at about 1 million students. We had a total student population in the fall of 1966 of 4,255,225 pupils.

Mr. **Pucinski.** In the country?

Mr. **Thornblad.** No, this is in the great cities.

Mr. **Pucinski.** In the great cities?

Mr. **Thornblad.** And about one-fourth of these would be in high school. This is roughly the approximation. If I may just comment on those figures for one minute. This is one of the problems of the large cities. Between the 1950 and the 1960 census, these 16 cities in population gained about 70,000 people. This was about three-tenths of 1 percent of their population. Between 1956 and 1966, this is a 10-year period which would be equivalent, the increase in pupils amounted to 31 percent in the public schools or more than 1 million students. So for some reason, the cities are just about stabilized according to population, but the increase in pupils attending the public schools is dramatic.

Mr. **Pucinski.** Of course, also, the type of change in school population has been very drastic, hasn't it? It has created great needs in terms of compensatory education, remedial reading and other things with the shift of families moving out of the city into the suburbs, and families moving in from the rural areas, where job opportunities are diminishing and moving to the city, hasn't this created tremendous problems in education for the big city administrators?

Mr. **Thornblad.** This is one of the greatest problems, the change in population really means a change in school programs. The students that are in the school in one given year may move and the next given year the school may have an entirely different set of pupils with an entirely different set of needs. You may want to employ a different set of teachers and a different program in a school building. The tremendous change is a problem for the superintendents, administrators and the principals of these schools. The program has to be flexible, and I think flexibility is one of the key words in education today and must, of necessity, carry into legislation involving the programs and support for these programs. In reference to this, I am thinking of the idea that when you appropriate funds for vocational education, many of the restrictions laid down are that it can only be applied to vocational programs, and these are spelled out specifically, A, B and C. Requirements for teachers are set forth by the State, which is one of the things we have for you today. The flexibility of going between programs that are strictly vocational and new ideas that may come along has to be within the range of expenditures of the funds you are allocating, so this flexibility in curriculum can be there to meet the needs of the student. It is really the pupil that you are looking at, not the program or the teacher or how do we use the funds according to law. We have got to do a good job for these pupils, and this is foremost, whether they have Federal or State funds or local funds, it has to be done.

Mr. PUCINSKI. Of course, the converse of this is that if we didn't specifically earmark these funds, they would have a tendency to get lost as they have for many years.

Mr. THORNBLAD. Right.

Mr. PUCINSKI. When I say "lost," I do not mean not used, but absorbed by other needs. As I said in my opening remarks, vocational education has been treated like a stepchild for too long.

Mr. THORNBLAD. This is absolutely true, and I think guidelines need to be laid down, but I still think that flexibility has to be maintained so you don't cut off good ideas that can't be done because we can't use the money this way. The needs of the students should be foremost.

Mr. PUCINSKI. Well, under this provision, if one State can't use the money, it will go to another State that can. The whole purpose of this is to stimulate the States into coming along with effective programs and use up their funds effectively or else they lose the money, and the State that is progressive in this field is going to get more than its share from the overflow.

Mr. THORNBLAD. Yes, sir: and in regard to this, we have foreseen this problem; and to assist the cities in developing a program and State plans to guide them, we have collected the State plan for the State in which these cities are located including the District of Columbia, bound them in a loose leaf volume, and we are here to submit two volumes of the State plans of these States for your committee to use as the cities have used them, in going through the plans and taking the best ideas from the various States, incorporating these into their State plans as they come up for revision each time.

Mr. PUCINSKI. I think this is a very important study of our hearings (see hereinafter). I am sure that when we come to discussing this legislation on the floor, many Members of Congress will want to know what has been happening in their respective States and how they can evaluate this situation in terms of what is happening in their community, so I am grateful to you for this information. I am sure it is valuable information which this committee will need.

Mr. THORNBLAD. Thank you, sir. In regard to your section 3, the Research Council has been carrying on a project with the help of the U.S. Office of Education under the Vocational Education Act of 1963 under the section for research and dissemination which I would like to report on briefly.

Although the member cities of the Research Council have made strides in the implementation of improved practices and have increased the diversity of course offerings and involvement of a great number of students in vocationally oriented classes, the task ahead is tremendous. It was for this reason that the Research Council sought support from the U.S. Office of Education for the series of regional conferences on education, training, and employment.

The members of the Research Council see the necessity of markedly increasing the activities of the world of work program. A major effort must come from the schools, business, industry, labor and government to reduce needless duplication of services and competition among services. There is need to define the functions of all agencies in preparing people for work, in placing them on the job, and in upgrading and retraining.

Business, industry, labor and government generally accept the idea but need to be helped to more forcefully realize that their goals and those of the schools are similar in their major objective: To make a productive individual of every boy and girl. If this objective is to be realized, coordinating action is needed for all participants: Business, industry, labor, government, and schools.

Through this series of conferences, the Research Council is providing direction to initiate this action and act as a catalytic agent for continued progress. While the demands of upgrading world of work programs are greater than can be met by the resources of any one city, converted attack upon the problems common to all is envisioned as providing a stimulus to further action on the part of each.

Accordingly, the Research Council is engaged in a research and development program that will mobilize and coordinate the resources of the cities, business, industry, labor, government, and schools to initiate action that will have the following specific objectives: 1. Better prepare youth for entry into the world of work. 2. Remove the road blocks which presently bar many youth from taking their place in the world of work at an age when it is normal, important and necessary for them to do so. 3. Coordinate the activities of business, industry and education in the preparation of young people for the world of work, to prevent duplication of efforts. and attempt to fill the gaps in preparation programs. 4. Eliminate the present time lag between the identification of new job opportunities and the inclusion of specific preparation programs in the schools. 5. Provide for a specific delineation of skills and knowledge needed for various job responsibilities.

To this end, we held three conferences, one in New York, one in Chicago, and one in Los Angeles; and we also have a report of activities that are a result of these conferences that are already underway.

Mr. PUCINSKI. You are talking about that, along with the other material that we have already put in the record, which will go into transcript proceedings here, so that we can have that material also for our files. I think it is very important to have that as part of the total study of the vocational problems.

Mr. THORNBLAD. I reported on each of the three conferences. The Eastern Conference and the Midwestern Conference reports have been published. The report for the Western Regional Conference in Los Angeles is now at the printers and will be available in a few weeks. We will make it available to you immediately. If I may have just a minute to give you an idea of what these cities are doing, it may serve as a guide for some of the programs you may wish to be able to fund through your legislation.

Examples of activities undertaken in this regard include a Midwestern Regional Conference that was addressed to the development of a proposal that investigated the present status of vocational and technical education teachers in relation to shortages, recruitment procedures, and certification.

Work is getting underway, I might add, on a proposal by certain midwestern cities to obtain teachers in various ways and train them and to work with the colleges and universities into getting vocational teachers trained specifically for the job the cities have to do.

In addition, a Western Regional Followup Conference was addressed to the topic of formulating a career development curriculum plan and resulted in a document which outlined the philosophy, objectives, approaches and priorities for a multilevel career development curriculum.

A cooperative 3-day conference was conducted with the Research Council, the Chicago Public Schools, and the Illinois State Board of Vocational Education to assist Chicago in the development of educational specifications for a career development campus. A rational and statement of objectives for the Chicago plan for career development education was writen as a result of this activity and was presented to the Chicago Board of Education for consideration.

A proposal has been drafted by the public schools of New York City for the development of a curriculum for occupational education in the secondary schools of that city. The proposal stresses an interdisciplinary and flexible schedule design.

San Diego is actively engaging in an evaluation survey of its total educational program. The purpose of the survey is to identify the direction for the development of curriculum changes that will embrace vocational education on the secondary level utilizing career development as a framework. A career development advisory committee has been formed in San Diego and is presently seeking to design a program that will enhance the San Diego School System and will meet the needs of all the students in that city.

The Research Council anticipates that vocational education will continue to be of concern to all member cities. To facilitate the investigation of this area of education, the Research Council encourages the initiation of research and development activities and will continue to serve as a center for the dissemination of materials.

Mr. PUCINSKI. Well, we are certainly grateful to you for calling this to our attention. It will be part of the record in the appendix of the record. Do you have anything?

Mr. HAWKINS. I have nothing.

Mr. PUCINSKI. We are grateful to you for joining us this morning.

Mr. THORNBLAD. Thank you.

(The reports referred to follow:)

EASTERN REGIONAL CONFERENCE ON EDUCATION, TRAINING AND EMPLOYMENT

THE RESEARCH COUNCIL OF THE GREAT CITIES PROGRAM FOR SCHOOL IMPROVEMENT,
CHICAGO, ILLINOIS 60625

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THE SETTING FOR REGIONAL CONFERENCES ON EDUCATION, TRAINING AND EMPLOYMENT

Preparation for the world of work is an essential function of any society. Presently, there are many forces interacting which influence emerging new patterns of the occupational world. These forces are especially evident in the large cities of the United States. The development of the large urban complex, continued population growth and changing characteristics, the imbalance between manpower supply and labor market demands, accelerating technological development and the challenge of automation are illustrative of conditions which have major implications for programs of preparation for the world of work.

Strengthening and improving the quality of vocational education is a subject of increasing interest. To a large extent, this interest has been stimulated by the work of the Research Council of the Great Cities Program for School Improvement. President Kennedy, in 1961, brought national attention to the problems of vocational education, and requested a review and evaluation of existing programs as well as recommendations for improving and redirecting these programs. The dimensions of the problem were outlined i the recent Report of the Panel of Consultants on Vocational Education, for which the Research Council prepared two significant studies: "Vocational Education in the Large Cities of America" and "Education for Tomorrow's World of Work." The culmination of the increased concern for vocational education was reached in December 1963, with the signing of the Vocational Education Act of 1963. This Act is surely a landmark in the progress of vocational education.

Present day America finds itself in an incongruous position. AAt a time of unprecedented prosperity, there are few employment opportunities for some members of society. Output and employment have raised to new record levels but unemployment continues to be a major social and economic problem for almost four million potential workers and their dependents. Contributing to this situation is the fact that many people are unemployable because they lack employable skills. There is a great need to equip people with a level of knowledge and skill required for new and different job opportunities. Optimal employment cannot be achieved if workers are idle because they do not quality or do not know how to meet job requirements.

Of special concern is the unemployment of youths between the ages of 16 and 21. Unemployment in this age group is about three times the level of the total labor force. It is estimated that 1,100,000 young people between 16 and 21 are neither in school nor at work. A large portion of this group is concentrated in the urban centers of our country. Unemployment is costly, not only to those directly involved bu to the whole society. Not only do the unemployed contribute nothing to the economy, but their impact on the community is felt in increased relief and welfare payments, delinquency, crime, immorality, and indifference. Unemployed young people often raise their children in their own image, and accelerate the cycle.

Compounding the immediate problem of the large number of unemployed youths is the fact that each year of the 1960–70 decade will bring even more people into this age group. While 2.8 million American youths reached age 18 in 1963, 3.8 million reached that age in 1965. Further, it is estimated that 60% of these young people will not attend college and 80% of them will not complete college. This group may not be prepared for any of the professions and will have a particular need for some other form of occupational preparation. If present trends continue, this preparation may not be available.

According to a study by the Research Council of the Great Cities Program for School Improvement, only 3.6% of the total pupils enrolled in grades K through 12 in ten of the Great Cities were in reimbursable vocational education programs. However, in public schools outside the cities in states in which these Great Cities are located, only 0.8% of the pupils in grades K through 12 were enrolled in reimbursable vocational education programs. These data indicate the greater effort being made in providing vocational education by the Great Cities. Even though this greater effort on the part of the cities is being made, the 3.6% represents only 96,064 students of the total enrollment of 2,681,985 in those cities studied.

The ever increasing number of young people, along with a simultaneous decrease in the number of jobs for them to fill, presents a challenge in itself. Two other factors, however, add to the seriousness of the situation. One is the problem of retraining adult workers and updating their skills as the need arises. It has already been mentioned that many of the unemployed do not have the skills needed by today's labor market. Because of increasing technological and scientific advances, it is possible that many workers will need to be retrained two or even three times during the work life. A second factor is the ever increasing demand for technicians and semiprofessional workers, those who require one to three years of post high school education.

In order to maintain an expanding economy, provision needs to be made to deal with the problems of preparing young people for their initial work experience, retraining adult workers and supplying technicians and semi-professional personnel. These are not problems which will solve themselves. The solutions depend upon an orderly, concentrated and direct attack at the source of the problems. This attack is deserving of the support of educational and other public agencies as well as private business, management and labor.

Although the member cities of the Research Council have made strides in the implementation of improved practices, and have increase the diversity of course offerings and involvement of a great number of students in vocationally orientated classes, the task ahead is tremendous. It was for this reason that the Research Council sought support from the U.S. Office of Education for the series of Regional Conferences on Education, Training, and Employment to be reported in this and succeeding publications.

The members of the Research Council see the necessity of markedly increasing the activities of the World of Work Program. A major effort must come from the schools, business, industry, labor and government to reduce needless duplication of services and competition among services. There is need to define the functions of all agencies in preparing people for work, in placing them on the job, and in upgrading and retraining.

Business, industry, labor and government generally accept the idea, but need to be helped to more forcefully realize that their goals and those of the schools are similar in their major objective: to make a productive individual of every boy and girl. If this objective is to be realized, coordinating action is needed for all participants: business, industry, labor, government and schools.

Through this series of conferences, the Research Council is providing direction to initiate this action and act as a catalytic agent for continued progress. While the demands of upgrading World of Work Programs are greater than can be met by the resources of any one city, concerted attack upon the problems common to all is envisioned as providing a stimulus to further action on the part of each.

Accordingly, the Research Council is engaged in a research and development program that will mobilize and coordinate the resources of the cities, business, industry, labor, government and schools to initiate action that will have the following specific objectives:

1. Better prepare youth for entry into the world of work.
2. Remove the road blocks which presently bar many youth from taking their place in the world of work at an age when it is normal, important and necessary for them to do so.
3. Coordinate the activities of business, industry and education in the preparation of young people for the world of work, to prevent duplication of effort, and attempt to fill the gaps in preparation programs.
4. Eliminate the present time lag between the identification of new job opportunities and the inclusion of specific preparation programs in the schools.
5. Provide for a specific delineation of skills and knowledge needed for various job responsibilities.

The timetable for approaching these objectives extends over three years. The first Eastern Regional Conference was held in New York City on May 12, 13, and 14, 1966, and was addressed to the theme: CHANGING EDUCATION FOR A CHANGING WORLD OF WORK. Cities which sent delegations to the conference were Boston, Buffalo, New York, Philadelphia and Pittsburgh. These delegations included representatives of business, industry, labor, government and civic groups, as well as school system personnel.

Prior to the conference, a planning session was held at which delegates from the above cities agreed that the major contribution of the conference should take the form of stimulating participants to develop plans for future action. The speakers were engaged to address the topics delineated by the planning group, and they were urged to direct their remarks to problems which have the potential for amelioration through local action.

WELCOME AND CHARGE TO THE CONFERENCE

BY DR. BERNARD E. DONOVAN, SUPERINTENDENT OF SCHOOLS, NEW YORK CITY

I am delighted to welcome you to the Eastern Regional Conference on Education, Training and Employment. This is a meeting that has particular significance. It is not a mass meeting. It is not a meeting in which somebody is going to whip up enthusiasm among thousands of people. It is a meeting which has been long in planning by the Research Council of the Great Cities Program for School Improvement to stimulate some earnest thinking about a very important matter facing the Great Cities. The concern is the economic future of the Great Cities, the ability of both industry and labor to absorb our young people. No longer is it merely a matter of young people being ambitious, forward looking and adventurous. We have come to the point in our society where things have to be a little better planned than that. It isn't quite the catch as catch can society any more as it used to be. Therefore, the Great Cities Research Council, which is primarily concerned with education, but which is also concerned with the forces which surround education, sought a grant from the federal government to conduct a series of conferences among few, but knowledgeable, people as to the directions in which we are going in the community and education in particular. We are delighted that you have come to New York City to talk this evening and tomorrow and for a short while thereafter about the future of the relationship between industry, labor, and education.

Tonight, for this very important conference which is concerned not with yesterday, not with today, but with where we are going tomorrow, we have with us a gentleman whose experience, training, and contributions in this field are so outstanding that I can't think of anybody else having been chosen to give you the keynote address. As Special Assistant to the Secretary of Labor for Economic Affairs, our guest speaker this evening has had wide experience not only in the economic and labor affairs of this country but has advised foreign countries, met with the United Nations, and served education as a member of a college staff. His experience is so diverse and extensive that what he says does not represent a parochial viewpoint but, and I use the word in a different sense tonight, is a thoughtful and integrated approach to the problem we are facing. I think he represents the best in thinking about this problem and therefore I am very pleased to introduce to you our guest of the evening—Dr. Seymour Wolfbein.

CHANGING EDUCATION FOR A CHANGING WORLD OF WORK

BY DR. SEYMOUR L. WOLFBEIN, SPECIAL ASSISTANT TO THE SECRETARY OF LABOR, U.S. DEPARTMENT OF LABOR

As Special Assistant to the Secretary of Labor, Dr. Wolfbein has had wide experience not only in the economic affairs of this country, but he has advised foreign countries, met with the United Nations, and served education as a representative of a college staff.

I was wondering why I had this tremendous sense of empathy as I got up to speak. I guess it's because all of you know that I have to take a plane back to Washington so this can't possibly last too long. You see before you ladies and gentlemen someone who is really filibustering for a moment or two—here I am in the City of New York faced with a group of people, a very considerable portion of whom have heard me at least ½ dozen times before. You know my background in vocational education, for better or worse, and it's not an easy business to stand up here and decide what kind of theme I'm going to use with you. As the superintendent said, this is hardly hallelujah night.

At any rate, let me start with a story which is pertinent—it was told by Professor Walter Heller whom I'm sure you all know, but in case one or two of you don't he used to be Chairman of the Council of Economic Advisers—a very famous economist and also a brilliant speaker. He tells this story of the time he was out in Denver, Colorado and he had an enormous audience that he always gets and he began his brilliant address and at the first pause somebody way in the back of the room yelled out "You're stupid." Now you know people who work for the Federal Government are taught never to answer back in kind—I don't know whether you knew this, so Walter Heller just swallowed hard and went on with his talk. Sure enough, at the very next pause this man out in back of the audience yells out "You're stupid." This goes on and finally Mr. Heller thinks he detects a slur in the man's voice so he's just waiting for him the next time—and it comes. Walter comes to a pause and this man yells out "You're stupid." Mr. Heller, with his brilliant wit comes right back and says, "Yes, and you're drunk." This man comes right back and says, "Yes, and tomorrow morning I'll be sober and you'll still be stupid!" There are many morals to that story but the most pertinent one for tonight is: Never underestimate the power of an audience, and it's particularly relevant to me. The problem I have really is how do I say the few words I have to say without being gratuitous and the reason I tell the Heller story is to emphasize to you that I haven't come up from Washington to give you the word—I have a few items I would like to submit to you in all humility and perhaps in the next day and a half you can reflect on them, while I catch the plane back to Washington, which looks more and more like a smart move, as the minutes go by.

I would like to indicate to you tonight what I think are the 6 signs for '66. I think there are 6 overriding, fundamental, turns of events which have slowly come to a head in 1966 which I think ties the package for us all, and so represents the frame, the context in which you are going to be operating for the next day and a half and frankly, I think, for the rest of your working lives. It would be a real help for me and for some of us who are operating at the federal level if for the next day and a half you could do a little reflection of the six points, while you deal with the problems that are on your program. I'll mention them very briefly. I hope you are all familiar with them, and I'll illustrate each of them with an example so you'll see something specific and concrete on each point.

Item No. 1 very quickly involves technological change. The most stunning thing you can say about this is that in the U.S.A., during the postwar period, productivity has gone up by a steady, persevering, persistent 3% a year. Output per man hour as we call it—the amount of goods and services a man hour of work can produce has gone up 3% a year. I'm sure you're all expert enough—you have bank accounts—to know if you put $100 in the bank and get 3% interest the first year you'll have $103. The next year you get 3% of $103—this is known as compound interest—and this is to say, ladies and gentlemen, that so far in the postwar period, just as this plodding, persevering 3% a year, productivity in this country has gone up by 80% and in the next 5 years when we finish a quarter of a century after World War II, output per man hour in this country will have doubled. Please note I haven't said anything about automation or cybernetics or numerical control of machine tools and a computerized economy and all the other items that you and I could talk about for the rest of this evening. So please understand that already we have had a real upturn in the amount of goods and services that you and I can get out for every hour of work put in, and if we are on the threshold of additional change of substantial magnitude, and that could very well be, then look at the point from which we're taking off! Imagine a country which very shortly will have doubled its productivity in a quarter of a century. Yet in a sense we need this. It's fundamental for our economic growth—both here and abroad—but that's the way the ball is bouncing in terms of the efficiency with which we put out the goods and I don't think anybody can operate anywhere, especially in education with what we want to do without taking this into account.

Item No. 2. I can even be briefer. And this follows from Item No. 1, and that's occupational and industrial change. We are the only country in the world where we actually deploy a majority of workers, not in putting out the goods that we use, but in the services, and in this country we have almost 15,000,000 more wage and salary workers on payrolls teaching, working for the federal government, transporting goods, buying and selling, and doing other services than we have in our entire goods producing sector of the American economy—including agriculture, manufacturing with 18 million people, farming and construction. For those who have a responsibility for what people get educated in, hear this well, because there is nothing in the offing that we can see which is going to change that trend. We crossed that line in 1950 and it hasn't been a race since.

Item No. 3, to tie the package a little tighter, I would entitle educational change and here again one or two figures will be enough. Do you know that 6 out of every 10 people in this country in the age group 5 through 34 are enrolled in school? Do you know that the median educational attainment of the labor force of this country is 12.2 years already? If you take the traditional professional fields like doctor, lawyer, economist and teacher and all the other ones that you and I are familiar with do you know what the median is? 17 in March, 1965!—the equivalent of a Master's degree. Some of you know that I have been in favor of a bill (I haven't been able to get a Congressman who is brash enough to introduce it). I would like to get Congress to pass a bill which would give everybody a Ph.D. at birth. Then we could really get started on the serious business of education and training. But that's going to take a while. We're sure going in for education, aren't we? In a real big way. May I say parenthetically that this is a median below which you will also find 50% of the distribution and I would like to end up this way—it's with that 50% below these medians that you and I, I suspect, are going to have the most business with. But put that into the package, too, of these 6 items that I present to you.

We've had technological change, we're had occupational-industrial change, we've had educational change—let's take as the *4th one* geographic change, since there's a group of cities and states represented here. And again, one or two figures to illustrate what I think is an absolutely stunning development in the U.S.A. One out of every six jobs in the U.S.A. is located in just three states. We have 50; three of them account for one out of every six jobs—California, Texas and Florida. Would you believe this? I don't believe it either—but you look it up my friends, and it didn't used to be that way a short time ago and the very geography of employment opportunities are changing too. I have said that one out of every 6 jobs in the U.S.A. is located in just 3 states. My name, title and serial number are somewhere on this program and if you should want documentary evidence of this, please write me—I'll be delighted to send you the evidence by return mail. I suppose the important thing about that statement is the dynamics of it—it's not surprising—population has been moving westward and southwestward—the important thing is that this is an enormous burst of change in a relatively short period of time. Each one of the items is—the technological change one is—even the education change is one of relatively recent history—in fact it's one of the prime common denominators of these half dozen changes—they are really moving. May I say incidentally, that again I haven't got the time to tie this together, and I don't think I have to with a group like this, but the big thing about these six is the fact that they do tie together. One of the reasons I think you have this kind of geographic burst of change is Item No. 1—the changing technology. There used to be a time when a good part of industry had to sit near a coal seam or where water power was or where a major style center was but the very technology of fuel, power and transportation is changing that. The very first book I ever wrote was on New Bedford, Mass. When I got there it was flat on its back. It used to be the biggest cotton textile center in the U.S.A. As I looked back into its history (I spent 6 months right there on Johnnycake Hill near the museum studying that city and all the records)—the big deal about New Bedford, Mass. was the fact that it had overnight boat service to the great style center of New York, N.Y. Now you can take a jet from Los Angeles to New York—by definition—in less time than the good old overnight boat, and this is the upending of this whole matrix. Imagine a country like this—the continent is almost tilted—and how do we deploy ourselves to take that fact into account?

To go on to the *fifth* one, I call it job change. It's not surprising that with the technological change, with the occupational-industrial change—with the geographic change and the educational change that you should get in this country today an absolute avalanche—or cornucopia—depending upon where you're sitting, in the pattern of job change in this country. A young man, for example, embarking on his working life today will hold on the average 8 different jobs—some of them may hold one or two—yet others will have many more. It's of some import to look that fact right straight in its eye and if there's ever an underscoring and an emphasis on that word change, which it must be obvious to you I'm using in each one of the titles of the 6, here is a perfect example. And how do we posture ourselves in the educational field to take that into account?

The *sixth* one is a very interesting one and has to do with, again, something I hope you are very familiar with—it's the manpower posture we are going to have to live through the next 10 years. The best way of illustrating it is as follows: If you take the 15 million increase in the working population that we expect between 1965 and 1975 and you make that figure 100% and you ask yourself who is going to be contributing to that increase, you will find that the age group 14–24 (that's the brand new workers) account for something like 40% of the net increase. There is also a substantial increase in the so-called older worker—men and women 45 years of age and over. But there is one age group where we are actually having a minus—in the middle of the population explosion—the age group 35–45. We are going to have a 7% decline in the number of workers of that age. When you put it in figures—perhaps more dramatic—there will be a million fewer people in the labor force in this country age 35–45 in 1975 than there were in 1965. As I look around this room, there must be some of you in that age group—please accept my heartiest congratulations! If my arithmetic is correct, you are the ones who were born in the 1930s and you know there was a depression then—a depression not only economically but in the birth rate—and it's interesting that we are reaping the events of the 1930s in this way. And, so our manpower posture is like an hourglass: A real big group of people on the young side, a real big group of people on the older side and a very narrow waist in between—in fact, to get poetic about it, for the one age group 35–45—the sands are running out. Now how do you manage an economy with that manpower profile? We're all going to be competing—the schools, the colleges, the government institutions, the business people, everybody is going to be wanting them—after all, that's the age group with a little career development already, with a little experience, where you begin to pick up people who have been around for a while and can do a job for you—and you are not going to have very many. This could turn out to be the optimistic part of the manpower picture because this is a tremendous opportunity to really advance the career development of the younger people who are going to have to do it if you want to fill some of these jobs, as well as a great chance for fuller utilization of our older workers. At any rate, as you wend your way through tomorrow and the day after, put these six in your package and ask yourselves, how are they going to affect some of these specific topics like employment and placement with which you will be dealing.

Let me follow this up by saying that I think that those of us who are in charge of trying to make some policy and operate some of these programs have three vantage points in particular which ought to stand us in good stead. I call them, as some of you know, my three matching revolutions. They are things that happened just in the last few years and we ought to really get on board with them. The *first* one is the revolution we've had in economic policy in this country—where we have said that it's going to be part of official government policy to do everything we can to generate economic growth and get more employment and begin to make some dent in unemployment. We did cut taxes in 1964 even though we had a budget deficit and this has become part, I think it's fair to say, of a consensus of opinion in this country that we use a proper blend of fiscal and monetary policy to achieve maximum economic growth. Now this isn't a perfect policy—you and I can criticize it—especially you and I who are economists—but a dramatic turn of events did take place which I don't think is going to change as long as you and I are going to be operating.

The *second* matching revolution, in my opinion, is the revolution we have in manpower policy and that's right down the line with what you and I are engaged in. And again, to save words let me give you an example. In March 1962, I engaged in one of the favorite Washington pastimes. I went up to the President's office to watch him sign a bill—those of you who have been in Washington know that a President takes about 50 pens to sign the bills. This was the Manpower Development and Training Act of 1962. It was hard getting it through Congress—it was a battle, but we got it through and what a lot of huzzahs there were! Almost three years to the day after that, we were again at one of these White House ceremonies, this time with President Johnson, and he was signing the Manpower Development and Training Act of 1965. That bill permits training and retraining, if you're unemployed or underemployed for 104 weeks with a training allowance, labor mobility demonstration projects, and many other major improvements. That bill passed in the House of Representatives by a vote of 392 to 6! Since then Congress has passed a huge Elementary and Secondary Education Act to the Higher Education Facilities Act. It takes three pages of single spaced listing to present the education and training legislation of the last 3 years. We have a new national committee on education.

The *third* matching revolution in which I think we are right now engaged is the revolution on Income Policy. We're the kind of country which very brashly gets up and says we're going to have a war on poverty. We're the kind of country where a distinguished group like the President's Committee on Automation says we ought to have a negative income tax. We're the kind of country which is in-the process of raising the minimum wage and extending its coverage to millions working. We're the kind of country which is making another commitment, i.e., to raise millions of persons to a level where education and training and economic growth become meaningful.

I'm going to take another few minutes and tell you, again in all humility and all respect, a few of the pathways down which we might consider going for the next few years in the light of all these changes. In fact I will even say that there are going to be a lot of people like myself who are going to go down these pathways and we'd sure like for all of you to join us. If you keep that six point package in mind, that intervening, harassing, persistent change that's elbowing us around all the time and not letting us come to rest in a nice snug little slot and if you keep in mind these three matching revolutions that I think we ought to partake of, then I would make the following suggestions to you, as the people who represent the leadership in Vo-Ed.

I would say *first*, that vocational education is going to have to become a bigger and bigger part of the total educational effort. What I mean is that I don't think we can afford any longer to say that there's some group of people who can't make it through the academic arena and who will therefore cast their lot in Vo-Ed. I have lost count of the number of career days I have been at where the mother comes up with her son with tears coursing from her eyes, saying "Dr. Wolfbein" (and when they say *Dr.* Wolfbein you know very well you're in trouble) what shall I do with this boy of mine?" "What's the matter?", I ask. "He has to take the vocational education course," she says, and she's crying. We need just as many manually talented people as we need academically talented, and Vocational Education has to stop being the dumping ground, has to achieve the same status, the same up-to-dateness, the same funding as other parts of the System.

Second, vocational education needs to expand up and down the age scale. For example, I don't think it's too far out to say that some of the best things to be done in Operation Head Start could be done in the arena of Vo-Ed. If there is anything we need in relation to the neglected, the disadvantaged, it is to increase the number of varieties of transactions with their enviroment at the earliest possible time. One of the best ways to do it is in the very early years and what a mistake it would be if Vo-Ed doesn't get right in there. Whether we talk of Operation Head Start or Colleges of Continuing Education, Vo-Ed has to be in there to effect expanding utilization of vocational education as the course of choice for more and more people. We have to deal with the 8-year-old and the 18-year-old drop-out and the 58-year-old man who needs refurbishing too. Most of our current, federally financed training programs are in the Vo-Ed arena and we must move from that vantage point to more and more persons throughout the age scale.

Third, I think Vo-Ed has to move into the neighborhoods. We have to bring vocational education to where the people are, to where it's needed—to coin a phrase—right on the firing line. Who else needs it more? Where else is it needed more? Many of us who have been in this field for a while are discovering, perhaps economically after all these years, that vocational education has become one of the major arenas in which is being played out the battles and the wars against unemployment, poverty, and discrimination.

Fourth, and finally, we have to do something about the quality, not only of the materials that we purvey and the courses of instruction that we give, but we also have to do something about improving our personnel. Why is it that when you go to the typical school of education—and I teach in one every summer in Ann Arbor—you find Vo-Ed almost always at the bottom of the totem pole? You have to hit it right there—at Genesis—where the attitudes of many of our white collar educators are born. You and I, even if we get a lot of people mad, are going to have to kick our feet like anything and say we're going to have the best in these schools, in these students, in these future educators. Otherwise you're not going to be able to wrap up this package.

Just a final word then you can go on to your reflections. I have emphasized the word change and I want to emphasize to you again that no one is immune to what we just said this evening, and by no one I mean not even you and me. No occupation, especially ours, is really immune from change, from the six portents of '66. This is what you will consider in this conference you're having the next day and a half, if you wish to realistically meet the challenges upon you. This, I think, is really the nub of the matter—how you and I are going to try to avoid obsolescence and meet the six signs for 1966 and the three matching revolutions.

Whoever the management is, thank you very much for inviting me and thank you very much for being such a responsive group.

INDIVIDUAL DEVELOPMENT, OCCUPATIONAL PREPARATION AND SOCIETY

BY DR. SAMUEL C. KELLY, PROFESSOR OF ECONOMICS, OHIO STATE UNIVERSITY

Professor Kelly is currently Director of the Center for Human Resource Research and Professor of Economics at Ohio State University. Since 1962, he has been a Consultant to the Organization for Economic Cooperation and Development on the Mediterranean Regional Project, and is currently a Consultant for the Agency for International Development and the Organization of American States, in manpower and educational planning in Latin America.

One can interpret the topic of this session, "Individual Development. Occupational Preparation and Society", as an inventory of the purposes of education and therefore, the ultimate criteria or the ultimate standards for assessing educational performance and defining the direction for educational development. It is in this light, that I interpret it and in this framework that I wish to make two rather general propositions.

One is that education is a means or an instrument to specific ends, rather than an end in itself. The specification of purpose as criteria for decision making is therefore increasingly important. The second is that as purpose criteria, the distinction between individual development, occupational preparation, and the needs of society are becoming increasingly blurred. One indication of the tenor of our times is that neither of these two propositions is likely to be seriously challenged, at least as long as they remain so general. Yet through much of our history they have been the subject of controversy, and this controversy has been reflected throughout the western world.

When I suggest that education is essentially an instrument, for individual and social ends, rather than an end in itself, I imply that the American philosophy of education has in the past generally failed to recognize this distinction. It has seen its instrumental role as the satisfaction of consumer wants. It has not in general, evaluated these demands in terms of more ultimate goals, but has responded to them as ultimate ends. American education is in some degree, a kind of a cafeteria of educational opportunities from which its ultimate end, the consumer of education, may pick and choose as he wishes. It does, of course, impose some dietary laws to prevent the student from being trapped by the dessert counter. With the exception of the United States, every established nation in the world is engaged in planning its educational system over the long term. In virtually every case, it is planning education on two fundamental criteria. One is the internal efficiency of the educational system defined in terms of the input-output relationships of the system or the effectiveness with which scarce educational resources are used in the educational process. The other is the relevance of the educational system to the ultimate purposes of the society.

In the first instance, the American educational system has little to learn. It is, in my view, the most efficient educational system in the world today. It is also, perhaps by virtue of affluence rather than foresight, qualitatively one of the best. Even the French, who are known to equal Americans in their provincialism, and for their distaste for emulating American culture, are currently adapting their secondary educational programs to the American pattern. Yet this country is distinct from all others, with the possible exception of the United Kingdom, in the extent to which it has refused to direct education in any formal way toward social ends. I am certain, that if you were to survey school administrators in the United States in regard to the purposes of education, the variety and the vagueness of the response would be startling. American education, like other American institutions is characterized by a high degree of pragmatism.

Let me try now, to make these generalizations more specific. The problem of adapting an educational system toward specific ends has two general dimensions. One is the definition of these ends. The other is their expression in quantitative and qualitative educational terms. We have, for our purposes, already defined the ends toward which the educational system is to be adapted. That is, to prepare the individual for his occupational and social roles, to permit the development of his full potential as a being and to serve those purposes of the society which may be distinct from those of the individual. Much of the present interest in adapting education to these purposes, both here and abroad, is based in two universal problems. One is the process of economic development with its implications for social and institutional change. The other, is the failure of particular groups within the society to find access to the benefits of development at the general pace. These two problems are, in fact, one. For the factors that are principal constraints on growth and development are also those which tend to limit access to specific groups.

Economists tend to distinguish between the process of economic growth and the process of development in terms of the magnitudes and the nature of changes involved. The first is usually defined as change resulting from the accumulation of resources and incremental changes in technology which do not involve radical changes in the economic or social structure. Development, involves radical change and it is this process that is characteristic of most countries of the world today. Mr. Wolfbein demonstrated, in his remarks last evening, that even in a country as economically advanced as this, the rate and forms of technological change are so great and so distinct that they are producing, and will continue to produce at an accelerated pace, great needs for economic and social adaptation. All Americans must be prepared to make these adjustments and those who are already far behind will find it increasingly difficult to do so. In this sense, economic change is a process of individual and social adaptation and it is this fact that blurs the distinction between the individual, occupational, and social role. In this perspective, there are three questions that the educational system must answer for the individual; how does he contribute to this process of change, how does he adapt to it, and how does he keep from getting lost in it.

Economic development is simply the economic perception of the process of developing an industrial society. It involves quantitative, and qualitative changes in both physical and human resources. It involves specific changes in the way in which economic processes are organized and it involves fundamental changes in the cultural environment including the attitudes, values, perceptions and behavior of individuals and society. The differences between the less developed countries of the world and advanced countries such as the United States, is that the forces of current change have different origins. In the less developed countries, the approach to industrialization will depend, in large part, on their ability to adapt traditional values, attitudes and institutions to new requirements. In this case, development is essentially a process of social change directed toward economic ends.

In the advanced countries such as ours, the relevant institutional complex is largely developed. The process for active economic growth is a process of accelerated, technological change and the response of individuals and institutions to its impacts and its possibilities. The individual contributes to this process and its promise as he contributes to the sum and use of technical knowledge and as he contributes to the ability of the society to adapt to economic progress in ways that will maximize the potential benefits and minimize potential costs.

The most obvious element is, of course, his vocational preparation in the narrow sense of skill. The general guidelines for potential contribution are again evident in the previous discussion. A very large proportion of the job requirements associated with growth are at the professional and technical level and require extensive education or training. The potential contribution of those with limited skills is declining rapidly and will continue to decline at an accelerated pace.

It is one of the institutional characteristics of this society that our approach to economic growth is essentially quantitative. We respond to the objective of full employment through expanded investment, which in turn, invites technological change. The new technology is increasingly concentrated in control mechanisms and other aspects of automatic production. This, in turn, spreads from the manufacturing to services and other formerly, labor-intensive sectors. As a consequence, the standards of employability are rising and will continue to rise.

In responding to the patterns of technological change, and its implications for employability, we need more specific guidelines for action than are currently available. In particular, guidelines that are relevant to dynamic change in job requirements and the nature of employment conditions. This point, however, is associated with the individual problem of adaptation and I will return to it later.

The less obvious element of the individual role is his contribution to social adaptation. In spite of the current debate over guns or butter, the real constraints on our ability to meet both needs and aspirations are the strength of traditional values and traditional perceptions. The problems of urban decay, area poverty, persistent unemployment, or unemployability, mental illness, delinquency, and many other problems of the great cities are associated with an industrial society and industrial change. The technical knowledge and resources to meet these needs are or can be available to us. But the real requirement for their solution is the willingness of society to act and to modify traditional values and institutions. In a free society, the social ability to act is a function of industrial perceptions.

The ability of an individual to contribute to social action and social direction depends in part on his ability to perceive its needs in a context broader than his own experience.

Education that adds to technical capacities without adding at the same time, a greater insight into the social context in which they will be employed contributes to the problem of social change and not to its solution. In my judgment, the teaching of the social services in the secondary school is qualitatively poor. It is largely concerned with the description but not the evaluation of existing social institutions. It is safe from attack because it provides few openings in this sense, it is a conservative force in a dynamic society. It is not worthwhile that students see so limited a relationship between the classroom and the real world. If the educational system is to contribute to social change it is this function that it can contribute most effectively and immediately. We should be able to put into the teaching of social science the same imagination and effort that we are now putting into the physical sciences and mathematics.

The problem of individual adaptation to a changing world is again one with many dimensions It is generally agreed that a first requirement for satisfactory adjustment to change is adequate information. Most individuals commit themselves to a pattern of employment in a single act and are the beneficiaries or the victims of that choice for most of their working life. One effect of the changing technology is to increase the lead time between the act of commitment to a particular preparation, and the act of implementing that choice in employment. At the same time, the information available to the individual as a basis for choice or to the educational system is preparing to meet his needs is grossly inadequate.

Present projections of the patterns of occupational change in local labor markets where they exist are extremely short-term and are usually relevant only to those occupations which require very short periods of training. Further, they are decentralized and tend to be uncoordinated between labor markets. Those projections which are of the longer term, are highly generalized for the nation and have limited operational meaning in guidance and counseling. I would admit that we have made some advance in this respect in the past few years. Yet we still rely, in large part, on the invisible and imperfect hand of the labor market to guide individuals in these important decisions.

In addition to the fact that wage criteria reflect only immediate or short-term change, there is a wealth of empirical evidence to suggest that they do not significantly affect occupational choice or occupational movements. Individuals respond in the main, to employment opportunities, that is, to job openings rather than to particular incentives. The range of choice known to most individuals entering or in the labor force is extremely limited and a large proportion of initial employments are made through family associations in traditional work relationships.

The capacity of the individual to adapt to dynamic, economic conditions by seeking employment that is rational in terms of potential change requires a far more sophisticated and extensive system of labor market information than is now available. The availability of this information depends not only on the development of the system of communication, but on the development of the mechanisms for anticipating and defining in operational terms, the patterns of change. The general diffusion of new technology ordinarily requires ten to twenty years. It is technically possible, with the techniques of analysis that are now available, to define the occupational implications of this change. All other countries are currently developing a system for making long-term as well as short-term projections of manpower requirements and relating these to their systems of education and training. Although they are frequently advised in this process by American economists, there is in our own society no comparable responsibility for developing a system of manpower planning that can extend projections from national generalizations to local labor market actions.

The factors that limit mobility and adaptation are much more complex. Those which are economic or technical are most obvious and have been the subject of extensive study for many years. The need for continuing opportunities for training and retraining throughout a work career is obvious *a priori*. The present limits in this respect are primarily the inadequacy of employment criteria for determining the directions which training should take and the absence of any criteria for defining responsibility either between educational institutions and industries, or within these agencies. There is, in other words, a need for a cohesive public policy to develop and coordinate a system of technical education in lieu of the current ad hoc response to immediate needs.

There is a complementary need to reassess our philosophy and poli
regard to the deployment of skills. However effective we may be in ident
real needs and providing appropriate preparation, the monetary and physi
straints on the individual capacity to react to known opportunity are prolo
for many. The economic man, responding rationally and immediately
structure of opportunity in a frictionless society, is a part of our mythol
not of reality.

Many of the constraints on the capacity to adapt are sociological or psy
cal. It is easy to recognize in non-industrial societies the impact of tra
values, role perceptions, and primary group relationships on the poten
individual and social change. It is for this reason that we have placed
emphasis in these counties on education as the principal instrument for i
as well as permitting change. Although less obvious, these constraints are
real in the United States. They are the principal factors which affect
and mobility, and lead to concentrations of unemployability in specific
among particular groups. They are not yet clearly understood in their
ship to the process of adaptation. We need a more extensive base of e
research in this context, as well as the application of these insights in ed
and through public policy.

WHAT BUSINESS AND INDUSTRY WANT FROM VOCATIONAL EDUCATI

BY JOSEPH E. CASEY, MANAGER, PROFESSIONAL PROGRAMS, LEEDS & NORT
COMPANY

Mr. Casey, a registered professional engineer, is manager of the Educati
Medical Programs of Leeds & Northrup. Devoting many years of
research, Leeds & Northrup has pioneered to bring the precision of the
tory to industrial measurement problems.

This classical question which has been once again brought to the fore
the unprecedented 89th Congress's Educational Legislation will always p
response that directly reflects the environment and circumstances of
viduals that are a part of the dialogue. Therefore, it seemed appropria
contribution could be made to this Regional Conference on Education,
and Employment if we could ascertain the degree of understanding by e
of Industry's true needs.

To implement this analysis, a direct mail survey was made of one
VIP educators that are active in "Adult and Vocational Education".
reaction to this issue was raised by a terse communication which read
In a Look Ahead". "As an educator, what, in your opinion, does indust
from Vocational-Technical Education Programs?"

The response was rapid and enlightening.

Jackson, Mississippi

"Personally, I believe that each section of the country would have
opinions, certainly we do not think as some of the federals think in
national defense, national finance, space programs, etc."

"Mississippi industry expects skilled workers from our Vocational-
Programs—an individual trained in the basic skills necessary for the p
of a particular product by a particular industry."

Cincinnati, Ohio

"From our catalogs, you may get an idea of what industry expects
educational programs, which we try to tailor to meet its needs."

"These are the most likely positions industry will offer our gradu
therefore a good guage of what is expected of our programs."

Columbus, Ohio

"—first and foremost, industry expects vocational-technical educati
vide students with skills and technical knowledge which will enable
enter industry on a productive basis, although the students will not be c
trained in their chosen occupation unless the occupation is of a low le
gards skills and technical knowledge."

Ft. Collins, Colorado

"Prospective employees who have been educated so they can becom
employees after a short orientation period."

"Prospetive employees who are alert and cognizant of the needs of fel
ers and practice good human relations."

"—industry also has some real responsibilities if vocational-technical schools are to be of any service to industry—"

"Provide leadership and direction to local boards of education and school administrations in securing adequate funds for staff, buildings, and equipment which will provide the kinds of education needed by prospective employees."

"Encourage parents and their children to investigate the possibilities of vocational-technical education as a basis for a career."

"Help to *restore* the respect and dignity that should, and used to, be given the person who works with things as opposed to ideas."

"In my opinion it isn't a ONE WAY STREET."

Haverhill, Massachusetts

"Industry is looking for Vocational-Technical Education programs to supply the trained personnel to help them to meet their production commitments."

Radford, Virginia

"Industry expects the Vocational-Technical School to develop basic attitudes in the students; personality skills which are prerequisite to a successful career, such as: good human relations, ambitions, initiative, honesty, self-confidence, aggressiveness and ability to work independently, are important."

"Vocational-Technical Schools are expected to develop manipulative skills pertinent to his vocation. The student should know all basic tools and be skilled in their use. He should be skilled in the operation of equipment in his field."

Hamilton, Ohio

"—industries greatest need is for young men workers who have the desire and initiative to produce as a skilled craftsman or a technician or who want to be an industrial worker."

Morristown, Tennessee

"In short—too much! We have several competitive industries in our community and each has its own way of manufacturing what is essentially the same product."

Rockville, Maryland

"A cooperative working relationship between 'education' and industry."

Mt. Pleasant, Michigan

"Job applicants with advanced technical backgrounds—"

Brooklyn, New York

"Before we can respond to such a request, we must have a clearer understanding of exactly what you have in mind."

Concord, New Hampshire

"—education should provide basic, specific technical skills, certain appreciation and attitudes relative to the value of people and the place of industry, the role and place of time, talent, finances, that all of this is not taught out of textbooks but much of it is captured in the day to day ongoing activities and interpersonal relations at the educational institution."

Bronx, New York

"As an educator I am concerned with the expectations that industry has with respect to Vocational-Technical Education Programs.

Will you be good enough to let me know what programs you plan so that I might arrange participation."

Pendleton, Oregon

"I do not believe that industry expects that we prepare the finished product that can fit immediately into a particular industry."

St. Paul, Minnesota

"Individuals with vision, imagination and skill and in that order."

North Miami, Florida

" 'Too much', I fear—"

"Ability, Attitude and Ambition are the "A's" I think you have a right to expect—each to a degree of training, home-life, and national ebb and flow of today's turbulent world."

"Industry should expect vocational people to ask for help. Help in guidance, help with educational materials and help to place trainees with the same hoopla college scholarship winners receive."

Salt Lake City, Utah

"Provide qualified entry workers in relation to job requirements."

"Provide entry workers with a wholesome job attitude and work philosophy."

Durham, New Hampshire

"Today the complexities of technology make it necessary for even more maturity for entrance into the labor market. Responsibility and dependability of a higher order is now expected."

Providence, Rhode Island

"—I feel that more emphasis should be placed on making the name "SERVICE-MAN" mean a good comfortable living—and not a tinkerer or jack-of-all trades; and should be something that the lower half of a High School graduating class with Mechanical or Electrical aptitude should aspire to."

Helena, Montana

"A real knowledge in and skill in basic fundamentals."

Philadelphia, Pennsylvania

"I would first like to point out that a pat answer is not possible. Industries themselves are confused about what curricula should be classified as vocational-technical education or what the academic level of such training should be. Some industries, inexperienced in the use of, or the correct employment of, the science and engineering technician, might well think of the science and engineering techology level of education as being in the vocational-technical areas. Such an opinion, I believe, is incorrect and I do not think that most responsible industries would refer to this as vocational-technical education."

"—industry in general looks to the vocational-technical programs as those which should produce unusually skilled workers. If, instead, an industry requires an employee possessing theoretical knowledge which he can *apply* in a practical method, then the industry looks to institutions educating science and engineering technicians or technologists, and not to the vocational-technical schools."

Wahpeton, North Dakota

"—training programs which will supply personnel who are adequately trained in both the manipulative and related technical information so that they are able to perform on the job with a minimum of break-in time or orientation to the job. That these employees are able to start at a level above that of the learner or entry level."

Augusta, Georgia

"—the technical graduate should have a sound foundation in the technology which can be built upon after he enters industry.

Trade students should be well founded in trade theory and must have developed some skill."

Denver, Colorado

"—first they expect us to produce workers with adequate knowledge and skill so that they might begin producing for the industry."

"In addition, I think they expect vocational education programs to upgrade employed workers."

A National Publication

"Few high school counselors seem to understand industrial occupations and the training they require They accept no responsibility for placing students on the job. They need to change their attitude toward the world of work. They give little or no attention to those likely to drop out, or to those who must be turned over to another agency. Likewise, very little attention is given to students who must enter the armed forces."

"—high schools should have the responsibility of *keeping students in school* until they move on to one of the following:

. . An educational program in a post-high school institution
. . A job in the world of work
. . The armed forces
. . Marriage (for girls only)
. . Some other social agency"

"It would be interesting to see what would happen to secondary education if this proposal were made mandatory. In a great many respects we would have a different kind of high school."

A USOE Research Project

"Twenty-six different industrial organizations, ranging from about 50 employees to those with more than 35,000 were visited and their needs discussed."

"Virtually all of the companies studied have a very real immediate need for the electro-mechanical technician."

"Few of those interviewed stated that at the present time they were acquainted with electro-mechanical programs now in operation. Graduates of these programs apparently are so few in number as to be of little significance in providing for the need."

"A broad educational base is preferred to a narrow area of specialization."

"Principles are far more significant than special applications."

"There is a great need for the technician with more than one discipline."

"Although it is expected that electro-mechanical technicians might want to further their formal education after completing their technical study, transfer credit for subjects included in the technology was not of concern. Virtually all recognized that to include transferrable courses could seriously jeopardize the quality of technical programs."

"Today limitations on the progress of technicians in an industrial situation are likely to be self-imposed, principally by individual interests and capabilities. For those technicians with outstanding abilities, opportunities exist as *specialists* or *consultants* within their own groups. From this it should be apparent that the competent engineering technician is not on a dead-end route. Instead, he is eagerly sought to fill responsible, well-paid jobs."

"It appears doubtful that a satisfactory program for the electro-mechanical technician can be created simply by combining portions of the existing electrical, electronic, and mechanical technologies."

"—there was almost universal agreement on the part of industry as to what is important."

"—core subjects"

"Physics—of the applied type"

"Mathematics—through applied calculus"

"Communications—drafting, sketching, composition, report writing. The ability to communicate was mentioned more frequently than was technical competency."

"Industrial Electronics. Regardless of the area in which the technician might be working, a good working knowledge of electronic devices, circuits, instruments, and systems is required."

"The development of the ability to 'see' what is going on, as opposed to 'looking at' an object or process is most important. Keen, accurate observation is greatly desired."

"Based upon careful observation the technician should be able to analyze and synthesize."

From this informal response it is evident that Educators as a whole do have a realistic understanding of "What Business and Industry want from Vocational Education."

Before summarizing a call for Action to which this Conference can address itself, it is appropriate that we fully understand how companies train personnel to meet the impact of automated plant processes.

"On-the-job" is the most prevalent form of education and there is much room for improvement in this type of training which is less theoretical than that received in formal classes. Many companies merely place a man in the job expecting him to absorb what he can, while other organizations employ a well planned program under the guidance of highly qualified supervisor's, depending upon frequent progress checks as a means for measuring results.

"Formal in-plant" training programs are usually the best way to train top flight technical workers. These programs use outside instructors or "In-House" personnel. Successful "Formal in-plant" training programs are functional. This approach uses the study of specific Business or Industry processes as the media for principles and concepts. Functional texts are used to implement the training. fundamentals are introduced only when needed to understand the subject. Learning experiences simulate job activities.

All successful programs developing "on-the-job" personnel to meet the impact of automation must take into account the characteristics of the employee who will be a success in the world of automated technology. This new member of our economy is an individual who predominantly performs routine and assistance functions without assistance or direct supervision. He is self-reliant with a high degree of intellectual discipline, recognition motivated and assumes full job responsibility.

The world of Automated Technology has brought into our Business and Industrial environment electrical or electronic equipment which by their very nature have parameters that differ from the previous counterparts. Therefore, programs that will develop personnel proficiency must recognize these fundamental equipment characteristics.

Electronic equipment requires the skills of a person who can think and resolve solutions from intangible parameters.

Mechanical equipment requires personnel skills that evolve solutions from tangible means.

Mechanical equipment by its nature can be subjected to preventative maintenance resulting in a cost of ownership that includes the initial price, the continuous operating cost of preventative maintenance, parts and supplies to maintain peak product performance.

Electronic equipment by its nature is not prone to preventative maintenance. Electronic equipment reflects a cost of ownership that includes the initial price, an operating cost of parts and supplies plus the price of skills that are necessary to promptly correct a malfunction of equipment on an unpredictable "fire engine" basis.

In summation, "What Does Business and Industry Expect from Vocational Education?"

Briefly—A predictable level of achievement in:

PROBLEM SOLVING
COMMUNICATIONS
PERSONAL RESPONSIBILITY

All of which are compatible with the entry occupations available in the local economic community.

What of the future? This is best expressed by a direct quote from the "Manpower Report of the President—Transmitted to the Congress—March 8, 1966" which reads—

"—a future where the first two decades of people's lives are spent growing up, physically and mentally fit—training for citizenship and effective participation in their country's affairs—attaining the education for service, for a craft, for a profession—getting ready for their roles as workers, consumers, producers, and contributors to a free society."

"—a future in which education and training will be a permanent bridge between learning, employment, and human development. Even as we develop new uses of technology, we recognize that people grow stale unless there is a continuous renewal of their knowledge, enrichment of their skills, and development of their talents."

"—a future in which help to those seeking a station in life—whether it be the young dropout, the first offender, the older man with an outdated skill, the military rejectee—will have an opportunity to fulfill their hopes and expectations."

Vocational Education—Partner in Labor Development

BY DR. JOHN A. SESSIONS, STAFF REPRESENTATIVE, AFL–CIO DEPARTMENT OF EDUCATION

Dr. Sessions is former Executive Secretary, International Ladies' Garment Workers' Union Staff Training Institute. He is a member, Local 35, American Newspaper Guild; Local 189, American Federation of Teachers. Dr. Sessions has lectured and acted as consultant on Workers' Education in Norway, Denmark, Sweden, France and Indonesia. He is currently a consultant on the problems of young workers to the International Labor Office.

Fearfully, the silent field faded
Under the deserted guns;
As the love floated,
The dark sun glowed ominously.

I do not happen to think that this is a terribly good poem, but it is better than 90% of the poetry that is published in America today, and in many ways it is one of the most important poems that has been written in the English language since the sonnets of Shakespeare. This poem was written by an IBM 709 computer. Among computers the IBM 709 is pretty creaky and old fashioned, and yet it is capable of writing 500 of these poems in one minute. That is more poems than John Keats wrote in his entire lifetime.

Now, I started to do a bit of arithmetic as I was thinking about this. A poem, of course, is of no use unless somebody reads it. It occurred to me that if you took one thousand of these IBM 709 computers and put them to work 24 hours a day writing poems at the rate of 500 a minute, and then hired people to read these at the rate of one poem a minute for 40 hours a week, to keep up with the output of these 1,000 computers, it would take all of the unemployed workers in America. I submit this as a novel solution to the problem of unemployment.

There is one difficulty with my solution to the problem of unemployment and that is that most unemployed workers are not very skilled in the reading of poetry, and quite honestly, most of the poetry is not really worth the effort. The person who programmed the computer had some misconceptions about poetry which he programmed into the machine and the misconceptions came out in the poetry which resulted. So in order to do this kind of thing, we would have to have an unemployed work force that knows a great deal more about reading poetry and we would have to have programmers who knew a great deal more about writing it.

But here in this rather whimsical way we can see many of the problems of vocational education. We live in a world in which to be a worker, a trade unionist, a citizen, one must know a great deal more than individuals have ever been called upon to know in the past. Not just our doctors and our lawyers, but our plumbers and electrical workers and mechanics, if they are to survive in the economic realities of the world today and tomorrow, are going to need an education which would have been beyond the reach of Plato's philosopher kings.

Organized labor has long been concerned about our national manpower policy and about vocational education as one important part of that manpower policy. Labor was among the first groups in the nation, back in the early 1950's, to reach a conscious decision that the government must play a much more important part in training and manpower development. We have regarded the Vocational Education Act of 1963 as a part of a substantial body of legislation which includes the Area Redevelopment Act, the Manpower Development and Training Act, the little-used training provisions of the Trade Adjustment Act, and the Economic Opportunity Act. These various pieces of legislation provide a kit of tools available for the intelligent planning of our manpower and training programs.

Taken in these terms, preparation for a vocation is something which starts very early in the individual's life and it must be available throughout his working years. When a baby is about six months old it becomes fascinated with minute objects, picking up bits of lint or flecks of dust and examining them in great fascination. This is probably the beginning of what might be called learning pre-vocational skills.

Certainly vocational education, as we are talking about it today, should begin no later than high school. Yet it is an unhappy fact that most school administrators have been so pre-occupied with the needs of their college-bound students that they have been inattentive to the needs of the students who do not plan on following high school with college. As a nation we can well be proud that one-third of our young people follow high school by entering some form of higher education. And yet, we must not become so carried away that we forget that two-thirds of our young people do not go on to college. Under the best of circumstances, there will continue to be millions of young people who won't go to college; who don't want to go to college; and who should not have to go to college to establish a place for themselves in society. Among them will be some of our ablest young people. Our schools are not doing their job if they concentrate all of their major efforts on the one-third who are headed for college and give short shift to the two-thirds who are not.

Most guidance counselors can provide a student with precise and detailed information as to the courses, grades, and test scores which he will need if he is to be seriously considered for admission to Harvard. But it is the sorry fact that very few guidance counselors have even a remote idea of what high school preparation would be desirable for an apprentice electrician.

We need then a high school level vocational education which is a part of a total system of education that provides every student with maximum opportunity for self-development. We are all familiar I know with the attitudes of the past which have given vocational education a disreputable name. We have seen vocational education used as a dumping ground for students who could not make it in academic programs or who were incorrigible disciplinary problems. We have seen vocational education used as a way of diluting skills to produce a slack labor market. And we have seen vocational education preoccupied with training for non-existent jobs.

We have officially turned away from these things. Organized labor played a significant role in making it our national policy to regard vocational education on the one hand as an integral part of education itself and on the other hand as a key part of manpower development policy.

Educationally, we have widened our conception of what is vocational. English and mathematics are as much a part of vocational education as mechanical drawing and the use of tools. And it is not simply as tool subjects that vocational students need the liberal arts. Literature, history and the social studies provide the sense of human dignity and purpose that every citizen needs in twentieth century society. We need desperately to build a new kind of curriculum which makes rigorous general education meaningful to vocational students. We need it because they need it to perfect their skills and we need it because the purpose of vocational education is not simply to prepare the student for a job, but rather to help each student find the best that is in himself.

We need also, incidentally, to concern ourselves more than we have done in the past with the quality of vocational education or what might better be called pre-vocational education which ought to be part of the educational experience of non-vocational students. Integration of the vocational and academic curriculums can be a profitable undertaking in both directions.

It is not important whether vocational education be housed in the comprehensive high school or whether it be housed in a specifically vocational high school. Local circumstances can best dictate this. What is important is that the school be prepared to offer the student the kind of integrated education which I have been describing. This is the clear implication of the national policy which we have adopted.

We have also adopted a national position with regard to vocational education as a part of manpower policy. No longer is vocational education to consist of training for non-existent jobs and diluted skills. These things are, as I say, a part of our national policy, but in all honesty they have not yet been made to work.

If we are to fulfill our announced intentions, then we must look closely at the job market and we must look closely at the students whom we are preparing for it. Hopefully, vocational education will attract many students who have achieved high proficiency by the time they enter high school. We need high ability students in the work force. But surely there is no greater educational challenge for vocational education than the part which it can play in preparing disadvantaged young people for a useful and productive life in the labor force. We cannot accomplish this by the traditional ways; we need to explore bold, imaginative new approaches.

Nearly a third of our young people drop out of school without graduating, and in most of the great cities the figure is even higher. These young people leave school before we even have a chance to reach them through traditional vocational education methods. There is only limited hope in urging them to return to the schools which failed to engage their interest before.

In this regard the development of skill centers separate and apart from the vocational schools offers great promise. Properly run, they can reach young people who would under no circumstances return to the structured program of the high schools. Skill centers can also be helpful with adults who have serious anxieties about going back to school. Skill centers provide flexibility in program, training, and time schedules that make them an important part of a manpower development program.

The development of co-operative work-study programs offers another way of breaking the traditional classroom pattern. Such programs in which classroom work is closely co-ordinated with related work in industry present an opportunity for imaginative community planning. This is not a job that vocational educators can perform on their own; it requires the best efforts of the entire community to make certain that the jobs are meaningfully related to skill training. The jobs must not be mere busy work and they must not be conceived as simply a way to provide the students with spending money. They must be an integral part of the educational experience.

We need also to make certain that the jobs are economically realistic. We are trying to prepare young people for a future in the labor force that will be productive and that will ensure them a decent standard of living. Quite frankly, we cannot do this if their training period is used to whittle way at union standards. For the time that they are on the job they must be paid the wages which are proper to the work that they are doing. And the jobs which they do must not displace other workers who would normally perform them. Otherwise the training process would do serious damage to those very future employment opportunities for which we are preparing them, a self-defeating process by which hopeful expectations would only be followed by further frustration.

But within the limitations of this framework, educators, government officials, management and labor can develop new and creative programs that will reach countless young people who find the traditional educational mold uncongenial and who, in the normal course of events, would leave school and drift into low skill, temporary jobs.

There is something else that we must be concerned about if we are to make vocational education a meaningful way of recruiting disadvantaged young people into the work force. We need to be more creative and imaginative in seeking teachers for vocational education. Traditional methods of teacher training and certification are generally not very helpful in recruiting teachers who can establish rapport with low income children and children from minority groups. But traditional methods are particularly unsuited for recruiting vocational teachers. We need to forget most of what we have thought about educational degrees, recruit experienced workers into vocational teaching, and give them the necessary training they need to become teachers. And certainly, when we get them, we need to modify teachers' salary scales so that vocational teachers get credit for their work experience and do not have to get a master's degree in education to qualify for the higher levels of the salary scale.

There has been, in recent years, a good deal of experimentation with new ways of organizing classes in schools. Team teaching methods have proved to be especially effective in the education of low-income students. There has, so far as I know, been very little thought given to the possible use of team teaching techniques in vocational education. And yet the idea has intriguing possibilities. Teaching teams, for example, might well make use of teacher aides who could be methodically selected on the basis of their ability to relate to low-income and minority group students.

So far I have been discussing the students and ways of reaching them educationally. It remains to consider the nature of the labor market itself. So much has been said about the educational needs of the labor force that there is sometimes a notion that within a few years none but college graduates will be able to find jobs. This is, of course, a colossal misreading of the evidence. It is a surprising fact that there are actually jobs in America in which illiteracy is a vocational asset. Some of the secret governmental installations prefer to hire illiterate workers to handle the trash because such workers will not learn any secrets from erroneously discarded papers.

The skilled crafts are at the very heart of American production and they will continue to be so for the foreseeable future. And with few exceptions, the skilled crafts will not be made up of college graduates. They will be made up rather of young people who have had a quality high school education designed to meet their needs and in most cases supplemented with apprenticeship training or post-high school vocational and technical training.

There will also be a continuing need for unskilled and semi-skilled workers in production and especially in the service industries. These too, if they are to be more than drudges, need the best that the schools can give them. They need an educational background that will enable them to advance themselves through on-the-job-training. And they need subjects such as history, social studies and literature which can give them a sense of their own worth and which will help them fulfill their role as citizens in the world of the twentieth century.

If vocational education is to relate realistically to the labor market, it must strip away all of the insulation which separates the vocational school from its community. All schools must become community schools, and there is a growing realization of this among educators. We have no more room for the school which is open from eight in the morning until three thirty in the afternoon, five days a week from the Tuesday after Labor Day until mid-June. Schools must operate around the clock and around the calendar to give cohesiveness and direction to the communities in which they exist. This concept of the community school, serving the entire community and drawing strength from the entire community, is one of the most exciting things happening in education today.

Vocational educators can take considerable pride in the fact that vocational high schools, at their best, were in fact community schools long before the phrase had become a part of the everyday educational vocabulary. Other schools might close their doors at three thirty, but the vocational school did not. Instead it turned its attention to other groups of newly arriving students, bent on learning into the night.

Vocational education must fulfill this role of the community school even more vigorously in the future. It must serve the training and re-training needs of every segment of the community. And it must take strength too from every segment of the community. Every possible artery between the classroom and the community must be kept open. The more closely labor, industry, government and other education institutions are involved with the school, the better will the vocational school relate its educational program to the realities of the labor market.

To emphasize the magnitude of the task we are discussing, I think that I will end on what may seem a somewhat pessimistic note. I have just been reading a study of the first year winners of National Merit Scholarships. It is ten years now since those winners received their awards, and the National Merit Scholarship Corporation has made a study of what has happened to them during these ten years. Many of them are working at a variety of useful and interesting things. Others of them are still continuing their education in graduate school. But to me, the most astonishing thing was that 8% of these National Merit Scholarship winners were unemployed ten years later. Now that is more than twice the rate of unemployment that exists among the general population.

If that is the case with the National Merit Scholarship winners, I think you can see how very hard we must work if we are to turn out students from vocational education who are able to stay on top of the job market. If vocational education is to be anything other than an exercise in futility, it must command the best efforts of both our schools and communities.

In Tulsa, Oklahoma, one day I visited a vocational high school and in the mechanical drawing room someone had printed on the blackboard in those wonderfully precise letters that draftsmen learn to make, "IF YOU DON'T LEARN A TRADE, YOU WON'T KNOW WHAT KIND OF WORK YOU'RE OUT OF."

Vocational education will only be successful when we can say with full confidence that this is not so, that after you have learned a trade, you will go out into a world of full and dignified employment. When we can say that, we will have vocational education worthy of an age in which machines can write poetry and men can sail out to the stars.

THE DISCUSSION SESSIONS

Four discussion sessions were held following the presentations of the papers reproduced in the foregoing section. The discussion leaders assumed responsibility for a particular topic throughout the four sessions.

Each conference participant was assigned to a discussion group which attended a session on each topic. These groups were composed of representatives of management, labor, business, education, local, state and federal governmental agencies and various community groups. Thus all participants had the opportunity to express their views on every conference topic.

The purpose of the discussion sessions was to develop ideas which have potential for future action on the community level. The following remarks summarize the discussions on each of the topics and set forth significant ideas which were expressed in the sessions. It should be emphasized, however, that these remarks do not necessarily represent points on which there was consensus. Rather they are provided here as points of view from which further community activity can be undertaken.

EDUCATION FOR EMPLOYABILITY—LEVELS OF PREPARATION

DISCUSSION LEADER: ELI COHEN, EXECUTIVE SECRETARY, NATIONAL COMMITTEE ON THE EMPLOYMENT OF YOUTH, NEW YORK

The discussion on "Education for Employability—Levels of Preparation" sought to determine whom to train, for what, and with what curriculum. This led to related questions such as when and where should training take place, how to integrate the vocational with the academic, how to get real employer and union cooperation, and how to keep up-to-date in the face of changing technology. Underlying was the broad question of what else besides the students needed changing in order to deal with the situation.

It was clear that there were no single or simple answers. The views expressed were pluralistic, and the keyword was multi-level. The youth differed in their needs, readiness and capacities for training. Employers differed in what they wanted from the schools. Occupations differed in their requirements, level and duration of training. There were disagreements over the relative merits of vocational vs. academic education. Even where there was agreement on the need for every student leaving school to have something to offer in the job market, there was disagreement over how to define that "something." It is no wonder, then, that the ideas developed and expressed below represent a wide range of viewpoints.

The statements represent the opinions involved from the discussion groups. These groups were composed of representatives of management, labor, business, education, local, state and federal government agencies and various community groups.

1. If we don't educate people to recognize that the job they are doing is going to be changing throughout their career several times, then I think we're not doing the necessary education. I still feel that the best approach is to prepare a person for an occupation, let him grow on the job, and I firmly believe that the recognition will come eventually, either in his own line or in one related.
2. A mature setting is needed for returning dropouts. They will not participate with the group of younger students. A school is needed in which they can be treated maturely as a group. They may even be paid to return.
3. I believe that every youngster, before graduation from high school, or even as being classified as a dropout from high school, should have the assurance of a skill which may be vocational. It may not be given to him for vocational purposes, but it should have that possibility. We ought to expose youngsters at a very early age to the opportunities in the world of work.
4. As technical training increases, a person is much better off getting a generalized background to go from one job to another readily . . . including the three factors—communication, problem solving, and personal responsibility—with overtones of work experience which he could attain within the time of his schooling.
5. Industry has certain standards of employment and they want an index of potentiality of a youngster. Those falling short are often screened out. So you see, we cannot take the industrial viewpoint completely, but we must accept the industrial requirements.
6. Re-training may occur either in or out of an occupational area. In either case, we want a strong basic education upon which re-training can take place. A strong occuptional education in specific areas can standardize these requirements for entrance into a vocation, providing all the necessary mobility.
7. The knowledge you can carry along from one job to the next is, by and large, abstract knowledge; it is not concrete and specific. This knowledge we have clarified and almost sanctified in our country. The superb thing about vocational education is that it puts kids up against the real world. We should use this experience with the real world as a springboard to the traditional disciplines which kids could then carry over to experience with the real situation. We want to see if competence can be reached by means of this essential component of vocational education with the equally essential component of academic education.
8. The role of industry and education is not well defined. Research study is needed concerning the needs of the employer and the aspects of training which the employer will and can accept.
9. The basic thing facing us is the realization that we need levels of preparation of different kinds. We must understand the people that we have within our schools: who they are, what they are, and why they have certain problems.
10. The concept of occupational clusters is nothing new, but we're just beginning to open our eyes to the lower levels of preparation. We are not as familiar with this kind of curriculum, and we don't know much about the required methodology.
11. We are moving away from the rigid type "A" programs which involve three hours a day (of shop class). More flexibility is needed to allow for those students who change their minds half way through, and delayed bloomers who should still go on to college work. Multi-level preparations, now going on in the summer school, may be one approach. The true success of any one of the programs is the fact that very early in the curriculum you are emphasizing career development and career planning. This involves training

for the occupational cluster with a very strong caution against premature specialization.

12. No education is terminal. We need better vocational guidance at lower levels for information, for selection, and for placement.
13. We do need improved relationships with industry. I think industry today is really isolated from the schools in a great measure. Coordinators could talk to industry now and then and improve the situation. I wouldn't be surprised but what industry might provide a number of coordinators or finance such a program.
14. Students should receive as much general education as possible. Special training for specific job skills should be done in three ways: (1) Low level skill jobs may best be done on an on-the-job basis; (2) A skill center may be established for educating both young people and adults which would operate around the clock and around the calendar. It could perform both preparatory upgrading and retraining services. It could also offer some service to selected high school youth who would maintain their full-time enrollment in the comprehensive high school; (3) Centers are needed for post high school vocational and technical education, for engineering assistants, laboratory workers, or a wide variety of people, including secretaries, who still need the full high school education plus specialized training.
15. The question is not whether a high school student can learn the skills. This is assumed. Every student should have at least a high school education, if at all possible, and skill training may be superimposed. I just will not accept the fact that many of these students cannot be motivated.
16. The 1963 Act releases vocational people from the rigid set of occupational categories of the Smith-Hughes Act and invites them to deal with various other groups in society, such as the disadvantaged, the unemployed, adults, etc. I feel that the critics often ignore the needs of a large group of kids who are not oriented to the world of work, who haven't learned to read and write, and need some very basic kinds of programs.
17. The teacher's job at the simplest level with pupils who are not endowed with great ability is to help them attain a minimal performance level in the basic skills of reading, writing and arithmetic. The skills of adaptation are more difficult to teach. Adaptability is an index of intelligence.
18. We can't, as employers, say what we ought about those low ability people that we are not interested in. It is not a matter of getting them up to our needs, as I see it. You can't do this. These are a special group that must be channeled in some way into jobs that could be productive. We're not qualified as employers to answer this question. There are certain lower level jobs that might get earmarked away from this escalation, but they're going to be blocking the approach of others who can move up. We can't appreciate or understand your problem, except in our own light, and if you are gearing to our thought then we are compounding some sort of falsity.
19. The likely dropouts have been screened out of the vocational schools and forced back into the academic high schools, and nothing has been done for them. The vocational school is providing answers for a limited number of students, just as the academic high school has provided answers for a limited number.
20. The high school student has to be guided into various basic areas of concern of the business and industrial world. Even in the domestic world students presently have little concept of what areas of participation are available and little access to guidance people who know.
21. In all of these skilled areas there are different levels of skill required within one class, and the coordinator that is on the job matches the boy with the employment possibility. Many of these fellows who have graduated from our cooperative program are very successful where they are placed, but if you put them in another shop in the same industry, doing a different type of work requiring a higher degree of skill, they just wouldn't make it. These are the students that are in the lower group and are my primary concern; the people that are on top level can get by any time.
22. I think industry and education should prompt the government to cooperate in some way to establish business fellowships for counselors and teachers that would recognize a certain credit, a stipend to be paid, and time to be invested so that we could share this common viewpoint. The program could be conducted during the summer vacation period.

23. Probably one of the worst dropout cases is the dropout from the university, which represents, in some cases, 50% of the freshman class. The high school should have prepared these people to do something, and it has not.
24. There are several of us who think "skill centers" are really going to provide an education for people who are not fitted or suited to the present school system. Maybe it is a function of the Urban League or private agencies to set up a system that will handle students as they exist, handle people as they are if they can't stand the rigid formal institution of the public schools. These are the students who need a walk-around school with a teacher who understands their problems. Perhaps private agencies are going to do this, but I don't think that it is the function of nonprofessionals to set up a separate operation. I think that we have to do it some place in the school system.
25. You can go out with a high school education and get a job in a thousand different categories and be better trained than if you took some special skill training out of the traditional course. We don't know the levels of preparation; you couldn't get two people in the same industry to agree as to just what they want by the way of preparation of a young man.
26. The executive says, "Send us an intelligent kid who can spell, has good attitudes and communicates, and we'll provide the training". The personnel man in the same firm is likely to say, "What can this individual do; unless he has something specific to offer I can't hire him".
27. Can we send a young man out for a job as a mechanic if he hasn't had training to be a mechanic? Can students be trained on the job in aviation, dressmaking or beauty culture? My plea would be to provide within the high school curriculum, not in the traditional hidebound pattern, the opportunity for the youngster to at least get training, if he wishes it, for an initial job in a field of work. This may be only an introduction to the area. A girl who has never sat down to a typewriter is not going to get a secretarial job. I am talking about the knowledge in areas that will equip them to go ahead and be trained on the job. The company presidents say "we will train them", but don't mean they will train anybody.
28. Our selection criteria include: the "right attitudes"; the "right philosophy of life"; how do prospective employees feel toward work, toward employers, toward their fellow man; how do they get along with people, how do they communicate, how good is their math. Personal responsibility, communications, and problem solving are not normally taught in a trade school, but these are the things that make the difference between success and failure in our business. Even a meat cutter who starts out with a basic craft uses less of his hands and more of his head as he advances.

Job Placement: How Well Do We Do?

DISCUSSION LEADER: DR. FRANK J. DRESSLER, ASSOCIATE SUPERINTENDENT, BUFFALO PUBLIC SCHOOLS

The question stated in the topic can be answered quite directly and quite simply. On the basis of annual statistical reports and placement surveys, the placement record of vocational school graduates in jobs for which they were trained or in related jobs is very good.

However, there are many other questions which should be asked. How well is the pupil prepared for the labor market? How long does he hold his first job? Is he prepared for occupational mobility—upward or to another type of work? Has he wasted his school time by being overtrained for entry jobs? Who should be "selected" to receive a vocational education? What is the dropout rate in vocational education? How does this rate compare with other types of education? Who is responsible for job placement? Who can do this task best? What restrictive forces limit job placement? Do labor unions refuse to accept some graduates? Do health and child protection laws restrict placement?

These are some of the questions which were considered by the four groups which discussed this topic. Much of the discussion was related to personal experiences with existing programs in the large cities represented in the conference, and was very informative. Some discussants, however, generated more heat than light as they sought to justify previously determined positions relative to the merits of specialized vocational training.

From all the discussion, two points clearly emerged. First there is a great need for more accurate information about the specific job needs of industry, and second, there is a great need for more acurate information about what the vocational schools are doing to and for boys and girls.

The following statements represent the opinions and reactions evolved from the discussion groups. These groups were composed of representatives of management, labor, business, education, local, state and federal government agencies and various community groups.

1. I think the word "placement" circumscribes our thinking. We must think in terms of a continuous process of school counseling, training, placement counseling, and follow-up.
2. The school can do an effective job of placement because of the close relationship between students and teachers. This is especially true where the teacher has a close contact with the trade or has kept up-to-date on industrial processes.
3. The smaller the occupational area, the greater the degree of placement, since we are able to maintain close relations with employers and advisory groups. In larger employment areas where we are less close to industry, the employment service has a better opportunity to affect placement. In either instance the teacher who knows industry has tremendous potential for placing his students.
4. I would hate to see the employment service take over the placement of our regular day school people. I believe that is part of our vocational training. Placement is a definite measure of the job you do. If you can't place the boys you train, you ought to be out of business.
5. In some school districts the employment service has placed one of their people right in the training center. (Esp. MDT)
6. We need more liaison with industry to determine what they want as we go about trying to place students.
7. What we need nationwide are guidance coordinators who are in between school and industry and who can help the schools translate job titles, job clusters, etc. into curriculum.
8. Every school should feel an obligation to find out what happened to the graduates a year or two after graduation.
9. In most of our programs, if a boy gets out of work six or more years later we encourage him to come back to school to see what we can do to place him again.
10. We have had little difficulty in placing pupils who came out of school with proper preparation.
11. We need to make sure that the students coming to vocational schools want to attend. If they want to be a technician or a mechanic, or a tradesman, then we can make them one even if their intelligence is limited. However, a pupil that is unmotivated is very, very difficult to work with.
12. I think that the schools have a responsibility to induce motivation and that the schools have not yet performed this mission.
13. When you narrow vocational education to specialized training, you immediately begin to find that your training program rapidly becomes obsolete in terms of machinery, procedures, and processes.
14. Of greater concern than training for obsolete jobs, perhaps, is training for sub-living wage paying jobs. (Esp. MDT)
15. Is the type of preparation being provided for boys in specialized vocational high schools necessary for an entry job? Isn't there a large degree of overtraining to the point where it will take a man 5 to 10 years to reach the position where the skills taught to him are useful? Could he, perhaps, better pick this up through an apprenticeship or on-the-job training?
16. No training should be given unless there is within this training the elements which provide for job upgrading.
17. We are working to develop flexibility in employers' job specifications. We find that some have not been changed for 10 or more years and, therefore, do not reflect technological change nor the realities of the labor market.
18. Is it the responsibility of a school to train students for occupations in which there is a great national demand but little or no local demand?
19. The schools have an obligation to find Negro students who have the potential to prepare themselves to face the building tradesmen and say, "I am an applicant who is qualified." This puts the pressure on and there would be more acceptances than we think.
20. There seems to be some indication that vocational school graduates can be hired at higher initial salaries than graduates from academic schools, but the same employers who hire these students give preference in promotion to those persons hired with academic backgrounds.

21. Some vocational schools turn away almost as many students as they accept. This leads to questions about the validity of the selection process and the proper utilization of expensive instructional facilities.
22. Whenever anyone changes from one school to another and goes to another technical school, it is considered a transfer by the schools, but on the roles of the Labor Department it is considered a dropout. We made a study of our dropouts and found that roughly two-thirds of them are transfers going into other institutions or leaving the city. This is thoroughly misunderstood and gives vocational education a bad name.

JOBS IN THE FUTURE: KEEPING THE DOORS OPEN

DISCUSSION LEADER: DR. GERALD LEIGHBODY, PROFESSOR OF EDUCATION, STATE UNIVERSITY OF NEW YORK

We need to remind ourselves that the kind of vocational education we plan now will not become effective for a few years. We need also to remember that a student who is in the fourth grade today will spend the major part of his work life between the years 1980 and 2020. What will the world of work be like in that period and how can we best prepare him to participate in it?

No one can describe in detail the world of work of the year 2000. Unless strong present trends are reversed (and this appears to be unlikely) we can, however, reasonably predict the following for the worker of that day.

1. The chances are high, perhaps eight out of ten, that he will not be a factory production worker, a farmer, or a construction worker.
2. Whatever his occupation, he will be using a great deal of technical knowledge, will rely on much technical hardware, and will use few manual skills.
3. The chances are high that he will be engaged in work which will require frequent and successful relationships with people.
4. He will need the help of very competent advice and counseling in his meeting the changes which will occur during his occupational life.
5. He will have secured considerably more education than would be necessary for the average worker in mid-career today. An academic education equivalent to high school graduation will bear the same relation to job requirements that an eighth grade education does today. There will be few without formal education beyond the high school.
6. He will often be called upon to master new technical concepts and to secure additional education and training.

The overriding question to which these sessions were addressed was: How do we design a program of occupational education which will, in effect, be open and non-terminal?

The following statements represent the opinions and reactions evolved from the discussion groups. These groups were composed of representatives of labor, business, education, local, state and federal government agencies, and various community groups.

1. The educational program needs to be set up to meet the needs of the youngsters who walk into the school, and society needs to know that the youngster is going to have an education when he leaves. Every project developed by our school system represents an attempt to get the resources to attain this objective.
2. I'm afraid that we're training for re-training. I'm interested in setting up a basic education program for the oncoming youngster so that he won't have to go into a rescue operation.
3. We have to draw a distinction between the kind of job where the employer may just want good attitudes, and the employer who needs a typist and a stenographer and wants more than good attitudes. There is a possibility of developing attitudes by using the vocational program for a vehicle. However, the youngsters in the vocational program are apparently more dissatisfied with their programs than those in the general program because they drop out in large numbers. Using it as a vehicle is fine for those who can profit, but clearly isn't the answer for everyone.
4. We have to prepare the youngsters who are in our schools for the jobs that have to be done. We must also be concerned with the basis for continuing education. The entry jobs that used to bury the mistakes of the educational programs which were available to the dropouts are gone. Many youngsters are unemployable in their present emotional state. They have those personality defects which militate against the holding of a job.

5. The chief reason for one losing a job is not for lack of skill but for lack of personal stability. Somewhere along the line we have to face up to something which is much more difficult. It is easier to train a young person on a lathe than to give that youngster emotional stability.
6. We have to start re-defining the term "skill", and maybe these three things (problem solving, communication, and human relations) that have been mentioned have become so important that they themselves constitute the job skills.
7. I was nearly 30 before I settled into the kind of vocation that I found I liked. How many individuals at the age of 13 or 14 really know what they want to do, and if they find they are in the wrong place, have a chance to move back and forth? It seems to me that the whole concept of separating vocational education from other education is completely unacceptable. This is really the basic reason for talking about a comprehensive high school, and talking about training at the high school level in general terms.
8. We have youngsters participating in Chrysler Motors Corporation trouble shooting contest who are pretty competent in auto mechanics. They say they love auto mechanics but they are not going to say this forever. They're using it for a springboard and something to provide them for assurance of their livelihood. These young men will look for other opportunities. Some may become dealers or go into another allied line.
9. You can't train for management at the high school level. It is an adult position, and the training won't be used for years if you do give it. Youngsters are being trained for work habits and attitudes in the vocational program which are transferable and are of value regardless of the situation in which they find themselves. These are the things which make them adaptable, just as much as the mastery of such fundamental skills as reading and writing and getting along with people.
10. The man in his 50's with only an elementary education who finds himself in the job market today is out of luck. In a few years the cut-off line could be the 12th grade or more. What kind of education can we suggest for young people who will be meeting their work problems at that time?
11. We have an employment market for high school graduates and dropouts and we'll have it for a long time. To put vocational and technical training off to a post high school program may be begging the issue. Many of these youngsters need high school programs.
12. The people who are reserving vocational or skill training for post high school are presupposing that we have programs in the high school that will hold students past high school graduation. We're a long way from attaining this in many cities.
13. It is questionable whether we can any longer afford to say, "Here's a 14 year old—he can't read". The point is that somebody has to convince this youngster that he either reads or has no prospects in any occupation, and this must happen before he is 14 years of age.
14. There is no question but that those youngsters who are deficient in their reading and their arithmetic have to be taken in hand right now, at the secondary level, and given the kind of remediation they need together with intensive counseling.
15. We in industry get a lot of people with majors that we can't use, but we use the basics those persons bring to us. We commonly now require an associate degree or two years of college. Many jobs don't require four years of training and if they do, people can go to night school to fill out their academic program. The same principle applies to lower level jobs. If a person comes to us without having completed high school, but with some development in his basics, he can be employed and then go on to complete his formal schooling.

BUSINESS, INDUSTRY, AND LABOR: PARTNERS IN TEACHER EDUCATION

DISCUSSION LEADER: DR. GEORGE BRANDON, PROFESSOR OF EDUCATION, PENN STATE UNIVERSITY

Conferences with business, industry and labor and their relationship to vocational teacher education are relatively rare. The importance and scope of current problems in vocational education, particularly the realization that learning only occurs through effective teaching, make it imperative that teacher education should utilize the many resources of business and industry.

The following record of the discussion of vocational teacher education illustrates that many ideas, resources, activities, techniques, etc. can be marshaled to improve relationships and alleviate some problems. The discussion also indicates that we have a long way to travel in improving communication, sustaining action, and concentrating interest and attention, if real progress is to be made.

Cooperative efforts of business, industry and labor, particularly in the form of advisory committees to vocational education programs on operating levels, are very common and have produced inestimable returns for decades. This statement cannot be made in relation to vocational teacher education. Teacher education and its relationship to meaningful, effective programs of vocational and technical education must be further explored by all persons concerned with manpower development.

The following statements represent the opinions and reactions evolved from the discussion groups. These groups were composed of representatives of management, labor, business, education, local, state and federal government agencies and various community groups.

1. Separating the question of teacher education from some of the broader values of occupational education is not desirable. Business, industry and labor—three important contributors to the end product—should be brought into the deliberations concerning what is to be done.
2. The teacher of the so-called shop or laboratory subject, MUST come from industry.
3. We have found that retired, non-commissioned officers in the Army, Navy, Air Corps, are a good source of vocational teachers. These men have all been in positions of leadership for many years.
4. Industry has to be willing to surrender some of its most capable people—not the flotsam and jetsam—and the Boards of Education must be prepared to pay a suitable salary to these men.
5. A man can be found who has the skills that the school wants taught, but these skills are meaningless if the man cannot communicate effectively with students or fellow faculty members.
6. Does the Research Council offer any scholarships to vocational teachers? People recruited from industry or trades are mainly high school graduates. Do you offer any scholarships so that they can go back to college?
7. Most of the course work in vocational education—the related course work, not the shop work—is intellectually uninteresting and you have to pay a man a premium to get him to do that kind of work.
8. If you accept the single salary schedule, why not work on giving more credit to this mature man who may have an engineering degree, a master's degree plus engineering experience—why not recognize it?
9. There is a need for a continuing education of teachers in most school systems. When many teachers reach their maximum salary there may no longer be the same incentives to keep up contacts with business and industry. Other patterns should be used to insure continuous contact with industry so that teachers would be kept up-to-date.
10. The MDT Act makes practically no provisions for teacher training. In view of the fact that 95% of our staff comes directly out of industry as a result of recommendation of advisory groups from industry, we find that the 10 hours of teacher orientation time is entirely inadequate.
11. Vocational teachers who have left their jobs in business and industry to come into teaching should be able to return to that job to upgrade themselves in current skills and practices and receive in-service credit for such experiences.
12. I think that on a planned basis every vocational teacher or shop teacher should be required to return to industry for a sabbatical leave with the salary being subsidized. In other words, the Board of Education pays the basic sabbatical leave salary and industry makes up the difference.
13. RCA decided to send some of its top-notch scientists into the schools for teaching purposes. Some very interesting experiences developed in that relationship. The industry was interested in the academic type of youngster who could really take it and worked with honor classes in the junior and senior high school. Could we bring craftsmen into the school system for similar demonstration teaching experiences?
14. In the field of business education we have a Business Education Day during which all of our teachers are sent out into business establishments for a whole day. Last year we reversed the procedure and brought industry into the schools.
15. The average teacher may not realize how important it is for him to belong to an industry group. The future teacher should be imbued with the idea

that it's just as important for him to belong to professional groups in business and industry as in education.

16. I think that educators can't depend on the sense of responsibility of industry and labor who, after all, may have more primary responsibilities than community consciousness. It is up to vocational educators to persuade industry and labor that it is in their interest to cooperate in maintaining competent teachers.
17. Contact with the labor movement is important to vocational educators. I think, for example, that close relationships should be established with the steel workers, auto workers, rubber workers, oil workers, and a number of unions whose leadership has a broader interest in the total range of vocational education programs than the building trades leader, who often is very narrowly focused on his apprenticeship training program.
18. I think that advisory committees are a good first step; however, they aren't a substitute for informal contacts. The development of personal relationships between educators and business and labor people happens more frequently over lunch than in a formal meeting or seminar. I would suggest that a staff position be established in the school system that is at high level close to the top administration for the purpose of developing these kinds of contacts.
19. I think teacher recruitment could be one of those projects where a school man goes to a key person and says, "We have a shortage of teachers. We think in the trade and industrial area there are industrialists who could help us get competent people". Similarly, they should be able to go to labor people and say, "There are labor people who could help us find competent people. We would like you to contribute to this project".

SUMMARY OF THE CONFERENCE

The forces which in colonial times required literacy for responsible social membership, which in the last century demanded competence in the three R's, and which in the last decades demanded high school graduation, today demand continuing education. This describes an assumption which seemed to underlie much of the conference discussion.

The position of educators on this assumption will profoundly affect our manpower future. To supply the increasing demands of technology for ever higher levels of specialization, we find a commitment to an expanding educational foundation.

It was pointed out that the average worker will transfer several times from one job to another, sometimes in related areas, sometimes not. It is the task of education to provide him with the mobility which he needs to survive in his "carousel" of experience. It must provide him with the context into which he can fit the new and changing demands.

Maximum manpower utilization was a recurring theme throughout the conference. Achievement of full potential, placement at the highest level, and maximum utilization of skills were continually emphasized. These concepts are all relative to the ability of the individual and must be defined in terms of his unique capacities.

Vocational education, by definition, tends to specialize. Its responsibility, reiterated many times in the conference, is training for employment in a job. If it fails, for any reason, to provide qualification for a job, if it concerns itself with instruction for non-existent jobs, or if it is directed to persons unsuited to the field, it is education for unemployment and not vocational education. Selection for a given program on the basis of potential employability in the field is an increasing challenge.

The conference suggested many promising avenues of pursuit for those who are serious about coping with the problems.

1. COMMUNITY

Community involvement was suggested as a high priority requirement for the improvement of vocational education. Community representatives, as well as educators, suggested: (a) more effective use of advisory committees, (b) working with industry in the recruiting and training of teachers and coordinators, (c) community feed-back for curriculum development, (d) promotion of vocational school programs by industry within industry, (e) purposeful effort to involve community leaders in such a way that they see their personal responsibility and affix a high priority to their participation.

Traditional craft committees perform a continuing and important function but are concerned with only a small part of the programs. Community involvement is needed in the basic functions and operations of the educational programs. Most member cities have already established a committee to accomplish this. Effort directed to continuing involvement, improving the representativeness of advisory groups, and developing new working relationships at this time will yield great returns.

2. EDUCATION BASE

Concern for the education base established prior to the vocational experience dealt with the correction of circumstances in earlier years which results in low motivation and dropouts later. Suggestions made at the conference related to teacher education, counselling programs, mental hygiene approaches and providing organized instruction in the world of work. Minimum acceptable levels of competence in problem solving, communications, and human relations were stated as the fundamental qualifications for employability.

That society has no place for the person who cannot achieve these basic competencies was repeatedly stated in several ways. The significance of this cannot escape educators who have counselled on the basis of career options that do not exist in the absence of these qualifications. The idea of prolonged effort to help less able youngsters to develop the basic skills of learning, coupled with the pessimistic view of the future for those who don't, calls urgently for experimental and action programs along this line.

3. TEACHER EDUCATION

Business and industry must be aggressively recruited, in the opinion of community representatives, to participate as a supplier of teachers and also in teacher preparation and in-service development. Advisory groups are needed for teacher training institutions to assure sound teacher education programs.

4. PLACEMENT

Absence of data on placement and follow-up leaves educators without information in regard to their service, program, or product. The fact of placement tells little. Other information should be known:

a. Does the job require the greatest use of those skills possessed by the individual?
b. Does the job provide for further development of the individual?
c. Is the job in the field of the employee's training?
d. How long did the job last?
e. What is the employer's evaluation of the employee's training?

One of the strong recommendations of the conference urged the development of more effective methods in both placement and follow-up. New York and Philadelphia have placement counsellors from the Bureau of Employment Security in their schools. This arrangement was reported to be highly effective and could be considered in other communities.

Agency coordinating committees have been effective in uniting the functions of agencies with overlapping or conflicting responsibilities. Work-study and cooperative programs have developed effective relationships with employers which have provided placement opportunities.

5. MANPOWER DEVELOPMENT

Maximum development of the manpower resource from the standpoint of individual fulfillment, as well as from the needs of society, was spoken of in many ways: underemployment, vacancies at high skill levels, unemployment among the uneducated. These were linked to the lack of motivation at various levels, to exclusive employment practices, and to premature specialization at the expense of foundational education, and to other causes.

The nature of the individual was the basis of much discussion. Youth vary in needs, readiness, and capacity. Many vocational students need a mature setting for effective instruction. Courses are needed both for the person and for the job. In the changing occupational scene, mobility and adaptability are key words, calling for balance in the foundational education program and vocational development.

6. CURRICULUM

The desire to generalize the curriculum to permit later job mobility and to postpone career commitment calls for considerable study of occupational or instructional clusters. The U.S. Office of Education has given curriculum studies high priority for funding under Section 4C of the 1963 Vocational Education Act. Action programs in this area are desperately needed.

Vocational education was discussed, not as something that occurs at a particular time but as being developmental in nature, along with other educational pursuits. Experimental programs designed to develop a concept of the world of work in the early grades seems imperative if a basis for career choice is to be established, if student aspirations are to be realistic, and if vocational readiness is to be achieved in time for normal transition from the community of the school to the world of work.

7. ADULT EDUCATION

Retraining, upgrading, and enriching the home environment, all point to increasing concern with adult education. If, as we are now saying, education is truly a lifetime experience, programs, facilities and instruction must be provided accordingly. Successes of centers established for work-study programs and skill centers suggest a beginning in meeting this challenge and may be worthy of study for other cities. One might suspect that the most effective way of enriching the cultural environment in the home is through adult education. The possibility of observing the impact through changes in child behavior is intriguing.

8. ARTICULATION

Overlapping functions and failures of cooperation cause confusion and difficulty for the student. The challenges coming out of the conferences on this point are quite clear. Roles must be defined, and working relationships must be developed. School administrations at all levels, from Head Start through higher education, should provide for transistion from level to level throughout the continuum.

STATUS REPORT, 1967

BALTIMORE, BOSTON, BUFFALO, CHICAGO, CLEVELAND, DETROIT, LOS ANGELES, MEMPHIS, MILWAUKEE, NEW YORK, PHILADELPHIA, PITTSBURGH, ST. LOUIS, SAN DIEGO, SAN FRANCISCO, WASHINGTON

THE RESEARCH COUNCIL OF THE GREAT CITIES PROGRAM FOR SCHOOL IMPROVEMENT . . . TO CONDUCT STUDIES OF UNIQUE PROBLEMS FACED BY THE GREAT CITIES—1956–1967

Those associated with big city education have long recognized that their problems are unique. At professional meetings they have typically gathered to discuss the affairs which, while important to them, were not included on the official agenda. The acknowledged urgency of urban school affairs resulted in invitations to representatives of ten major city school systems to attend a 1956 meeting in Chicago to discuss programs for vocational education. The Great Cities Program for School Improvement was begun informally at this meeting.

As time went on, the need for a more permanent organization was realized. Thus, in February 1961, the organization was incorporated as The Research Council of the Great Cities Program for School Improvement, a not-for-profit, educational organization. Since that time, the membership has grown to include sixteen major cities. The purpose of the Research Council is to conduct studies of unique problems faced by the Great Cities in their efforts to meet the comprehensive public school needs of their citizens.

The various activities of the Research Council during the past year have been summarized in this report. The Research Council seeks to continue the development of improved educational opportunities for all children.

THE RESEARCH COUNCIL OF THE GREAT CITIES PROGRAM FOR SCHOOL IMPROVEMENT

5400 NORTH ST. LOUIS AVE., CHICAGO, ILLINOIS, 60625, AREA CODE 312 463-4720

HAROLD S. VINCENT, PRESIDENT; SIDNEY P. MARLAND, JR., VICE PRESIDENT; EILEEN C. STACK, SECRETARY-TREASURER; CARL E. THORNBLAD, EXECUTIVE SECRETARY

President's Message

Since the formation of The Research Council of the Great Cities Program for School Improvement in 1956, the sole purpose has been the improvement of education for boys and girls. The Great Cities have endeavored to bring about this improvement through cooperative efforts involving Board Members, Superintendents, their Staffs and other recognized leaders in the profession. It has been the policy to concentrate our efforts on specific areas in which the problems are most pressing. Examples of projects in which the Council has engaged are Vocational Education, Education of the Culturally Deprived, Teacher Education, Fiscal Policy and School Building Rehabilitation.

Many of the Council programs have served as the basis for federal legislation. The Vocational Educational Act of 1963, the Elementary-Secondary Education Act of 1965 and the Teacher Corps are in part based upon studies conducted by the Research Council.

As we move into our second decade, we are looking further into the future of education in programs that will bring the full benefit of our advance technology to bear on the problems of education. An example is the Education Communication Project involving the integrated use of television, computers and instructional materials to be developed in such a way that the most effective use of these media may be focused on the teaching of the child in order that he may be an effective contributor to contemporary society.

The Executive Committee wishes to express their appreciation to the members of the Council Staff, the foundations and organizations that have funded various programs and to Board Members, Superintendents and their staffs for the contributions that have been made toward this achievement of the purposes of the Council.

HAROLD S. VINCENT,
President.

AMERICAN CITIES

American cities possess some of the rarest treasures of art, the finest music and theater, the greatest universities the loveliest parks, the most splendid vistas, the most elegant and luxurious living, in the entire world. Yet they also contain degrading poverty, revolting slums, incredible traffic congestion, bitter racial tensions, physical decay and ugliness, political disorganization, and rising crime and delinquency.

President Lyndon B. Johnson
Economic Report of the President
January 27, 1966

GREAT CITIES

The sixteen Great Cities of the Research Council are currently caught up in a period of rapid change. Urbanization over the past several decades has been the cause of a number of problems being created in central cities while at the same time this process has denied the central cities the means with which to seek solutions.

The total number of pupils enrolled in the public schools of these sixteen cities has *increased by more than 31%* over the past ten years, while the population increase from the 1950 census to the 1960 census was only *three-tenths of one percent.* This created a tremendous demand for school buildings and services at the same time the number of taxpayers was *decreasing.*

The high density of population in the cities may be added to the other factors of urbanization leading to problems. The "average" American is one of fifty persons living on a square mile of land. The state with the highest population density is Rhode Island with 812 persons per square mile. The Great Cities have a population density ranging from 3,851 to 24,697 persons per square mile.

The factual data in the following tables present a general profile of the population that the Boards of Education in the Great Cities are serving.

TOTAL POPULATION CHARACTERISTICS OF THE GREAT CITIES U.S. CENSUS 1950 AND 1960

	1960	1950–1960 change	1950–1960 percent of change	Population per square mile
Baltimore	939,024	−10,684	−1	12,520
Boston	697,197	−104,247	−13	14,586
Buffalo	532,759	−47,373	−8	13,522
Chicago	3,550,404	−70,558	−2	16,138
Cleveland	876,050	−38,758	−4	11,542
Detroit	1,670,144	−179,424	−10	11,964
Los Angeles	2,479,015	+508,657	+26	5,447
Memphis	497,524	+101,524	+26	3,851
Milwaukee	741,324	+103,932	+16	8,255
New York	7,781,984	−109,973	−1	24,697
Philadelphia	2,002,512	−69,093	−3	15,743
Pittsburgh	604,332	−72,474	−11	11,171
St. Louis	750,026	−106,770	−12	12,255
San Diego	573,224	+238,837	+71	2,944
San Francisco	740,316	−35,041	−5	16,307
Washington, D.C	763,956	−38,222	−5	12,442
16 Great Cities	25,199,791	+70,333	---------	-----------

RACIAL COMPOSITION OF THE POPULATION OF THE GREAT CITIES U.S. CENSUS 1960

	White	Percent	Others	Percent
Baltimore	610,608	65	328,416	35
Boston	628,704	90	68,493	10
Buffalo	459,371	86	73,388	14
Chicago	2,712,748	76	837,656	24
Cleveland	622,942	71	253,108	29
Detroit	1,182,970	71	487,174	29
Los Angeles	2,061,808	83	417,207	17
Memphis	312,799	63	184,725	37
Milwaukee	675,572	91	65,752	9
New York	6,640,662	85	1,141,322	15
Philadelphia	1,467,479	73	535,033	27
Pittsburgh	502,593	83	101,739	17
St. Louis	534,004	71	216,022	29
San Diego	528,512	92	44,712	8
San Francisco	604,403	82	135,913	18
Washington, D.C	345,263	45	418,693	55
16 Great Cities	19,890,438	79	5,309,353	21

PUBLIC SCHOOL ENROLLMENT CHARACTERISTICS 1956 AND 1966

	Fall 1966	Fall 1956*	Increase	Percent of increase
Baltimore	192,416	152,663	39,753	26
Boston	92,127	87,802	4,325	5
Buffalo	73,391	63,561	9,830	15
Chicago	570,597	416,224	154,373	37
Cleveland	152,932	119,522	33,410	28
Detroit	297,035	280,491	16,544	6
Los Angeles	719,325	425,187	294,138	69
Memphis	121,723	78,736	42,987	55
Milwaukee	125,567	84,385	41,182	49
New York	1,084,818	899,518	185,300	21
Philadelphia	270,449	226,190	44,259	20
Pittsburgh	76,661	66,740	9,921	15
St. Louis	116,798	89,182	27,616	31
San Diego	121,878	77,831	44,047	57
San Francisco	91,359	80,525	10,834	13
Washington, D.C	148,149	103,867	44,282	43
16 Great Cities	4,255,225	3,252,424	1,002,801	31

*Source: U.S.O.E., Current Expenditures per Pupil in Public School System: Large Cities 1956–57.

RACIAL COMPOSITION OF THE PUBLIC SCHOOL ENROLLMENT OF THE GREAT CITIES FALL—1966

	Percent White	Percent Other
Baltimore	37	63
Boston	74	26
Buffalo	64	36
Chicago	46	54
Cleveland	47	53
Detroit	43	57
Los Angeles	75	25
Memphis	49	51
Milwaukee	76	24
New York	50	50
Philadelphia	42	58
Pittsburgh	62	38
St. Louis	38	62
San Diego	90	10
San Francisco	44	56
Washington, D.C	9	91

VOCATIONAL EDUCATION

The development of effective programs in vocational education was the first area of concern of the Research Council beginning with an initial study in 1956. In 1959, Council assistance to cities in surveying their programs encouraged changes which recognized both vocational obsolescence and emerging occupational trends. Two Research Council publications were compiled as background material and submitted to President Kennedy's Panel of Consultants on Vocational Education. Since the enactment of the Vocational Education Act of 1963, (P.L. 88–210) which embodied recommendations of this Panel, the Council has continued to work for the mobilization of new and significant programs. During 1965, a two-year research and development project was initiated using a series of regional conferences as a central activity. This study has brought together the resources of cities, business, industry, labor, government and schools to explore approaches to better prepare young people for the world of work.

This project grew out of the enthusiasm of the Great Cities' Superintendents and Board of Education members as they reflected upon their participation in the World of Work Program. While expressing satisfaction with the Council's earlier activities, these people also realized the need for continuing concern for the problems related to vocational education. They renewed their interest at the Fall Conference of the Research Council, which was held in Los Angeles in November of 1965. The Board of Education members and Superintendents from the Great Cities unanimously approved a resolution stating that "all member cities give full cooperation to the project."

In December of 1965, a meeting of the city liaison people and central staff members was held in conjunction with the American Vocational Association Annual Conference.

At a meeting in January, 1966, representatives from city school systems, colleges, and universities, government agencies and central staff members discussed the timetable of future project activities and endorsed plans to hold the first Regional Conferences in May and August, 1966. Three planning sessions were held to plan the first series of conferences. The conference planning session groups were comprised of the city liaison representatives, selected community organization leaders, consultants and the Council project staff. The conference planning groups concluded that the conferences should be designed to elicit maximum participation of community representatives from business, industry, labor, government, minority groups, community action programs and civic groups. The significance of this decision was highlighted by one participant who stated that most new vocational education programs in the city originate with the appointment of a new member to the Board of Education. Most important, the planners emphasized that the conferences should be seen as only a preliminary to action and that it would be necessary to establish local follow-up mechanisms.

In developing the conference, the staff was urged to take a broad view of its content and potential. Thus, it was suggested that "community manpower problems" might provide a more suitable focus than vocational education in the traditional educational sense of the term. Similarly, the need to involve labor and management representatives who have "long-range vision" was considered important to conducting successful conferences. In some cases this may be a company research director, rather than the president or personnel director. When considered as a group, the conference delegations must include persons who can identify and define present and emerging manpower problems, suggest worthwhile and innovative approaches to these problems, and recommend means by which programs designed to ameliorate the problems could be implemented.

Planning sessions supported constructing of regional conferences that were addressed to and that would consider the following issues using a group discussion design.

Organizing structures for cooperative action and program development between the school and the community.

Developing vocational programs for inner city youth.

Identifying requisites for successful employment.

Identification of job opportunities for students who leave school at the completion of grades 10, 11, 12, 13, and 14.

Improving the image of vocational education within the cities.

Three Regional conferences were conducted that provided the opportunity for the member city liaison represntatives, with their respective city delegation comprised of selected community leaders to reflect and react to the issues presented.

A delineation of the observations derived through the conference group discussions may be categorized into the entities that involve the educational process. Each of these, the school, the community, the student, the teacher and the employer are highlighted as follows with factors derived at the Regional Conferences.

SCHOOL

Concern for the education base established prior to specialized Vocational Education experience necessitates greater articulation throughout the total school program. Improved occupational counseling programs, mental hygiene education and the organization of up-to-date curriculum commensurate to the World of Work are necessary for educators to consider. The need to provide help for the less able youngsters to develop basic skills of learning is urgent. Experimental programs should be facilitated in the school system to test new techniques and methods of instruction.

Educational leadership can bring about needed changes that can do much to improve educational inadequacies. Vocational education opportunities should be available not only to satisfy occupational goals but also for their relevance to other fields through the development of an integrated or interdisciplinary curriculum design. Such an effort could provide the vehicle for fusing so-called academic subjects with occupationally oriented subject matter.

COMMUNITY

Community involvement could lead to the improvement of vocational education. Community representatives at the conferences suggested the following:

More established use of advisory committees.

Working with industry and business in the recruitment and training of teachers and coordinators.

Establishing intern programs for teachers with industry and business.

Involving the community as a feed-back mechanism for up-grading curriculum development where related.

Affixing a high priority to the participation of community leaders that stresses their personal responsibility to help educators enhance vocational programs.

Communication of the vital social and economic role played by education in each community.

Involving the community in educational planning is basic to the recognition of the fact that significant benefits can be derived by cooperative planning and is essential to the support of the total educational program. The California Industry-Education Council was cited as an excellent example of cooperative planning at the Western Regional Conference.

STUDENT

Home environment and motivation are seen as factors of the school dropout problem. Improving the methods of identifying the protential dropout, implementing new techniques for the rehabilitation of dropouts and reducing the rising dropout rate are pertinent to the planning of educational change. As stated in one of the discussion group in this area, "It is too late to worry about high school curriculum if the potential dropout can be identified as early as the second and third grade." This insight emphasizes the need for focusing improvement of instruction to the total spectrum of formal education as it relates to the individual's growth.

The challenges coming out of the conferences on this point were quite clear; namely, that roles must be defined and working relationships must be developed by school administrators at all levels; that a systematic framework for an individual's educational growth leading to a realistic career choice is inherent to the total education program. Furthermore, the individual differences of the students should be accommodated for by evolving greater flexibility in the curriculum through the entire continuum of formal education.

It was indicated that the U.S. Office of Education has given curriculum studies high priority for funding under section 4(c) of the 1963 Vocational Education Act and that developmental programs in this area are desperately needed. In addition, experimental programs designed to develop a concept of the World of Work in the early grades seems imperative as a basis for career choice. This should be established commensurate with realistic views equated to the aspirations of the student. This could tend to improve the vocational readiness that an individual can achieve and afford the optimum number of our school population to make the transition from formal education inclusive of higher education to the World of Work.

TEACHER

Instructional personnel are aptly recognized as a key aligned to the strengthening of the educational process. Several ways of doing this were suggested. Industry and business may provide help for teacher improvement on an internship or summer basis. Industry may furnish, from among its personnel, competent people interested in education on a cooperative basis. Teacher aids may serve as a partial approach to teacher shortages and to reduce class load. The responsibility of teachers in all disciplines to transfer content to career applications is significant to the learner. In this regard concern was expressed that the educational process has suffered from rivalries between the disciplines. Teacher training programs and the development of in-service programs commensurate with societal and world of work demands are a continuous need.

EMPLOYER

The development of more effective methods of placement, follow-up and other resource information gathering that refers directly to standards for employability are necessary. Work study and cooperative programs were recognized as effective programs that fostered closer relationships with employers and that provided placement opportunities.

In the changing occupational scene mobility and adaptability are paramount and necessitate the need for balance in the basic education program with specialized vocational development.

Industry has little hope of changing the behavioral attitude of young employees and must select from those having the needed attributes.

Selection criteria have become more demanding as technology and complexity increase and low level jobs decline. The tendency is to seek an employe on the basis of his potential with the firm. Industry and business are making a large investment in education both within their organizations and by their tax support in the community. The involvement of their resources could strengthen the educational program and lead to greater satisfaction as youth and adults cope with the changing world of work.

CONFERENCE FOLLOW-UP

The liaison persons and their respective city delegations constituted the local action committee which formed the vehicle for follow-up activities in each city following the conferences. The purpose of the regional meetings was to stimulate the local group to consider new approaches to vocational education which could be implemented in their home city. As a follow-up to the conferences, each liaison person provided a list of conference outcomes as envisioned by his city delegation. This post-conference assessment, coupled with a series of follow-up meetings provided the baseline for the second phase of the project.

The follow-up meetings conducted by the Research Council attempted to formulate a viable rationale that would encompass the expressed desire of the vocational educators to improve present vocational education programs as well as identify long-range goals which would be applicable to the educational systems in the member cities. This necessitates the identification of all factors that relate to the administration and implementation of programs that would treat the issues and problems prevalent to vocational education.

Priority areas in the reorganization and development of a new approach involve the areas of curriculum, personnel, guidance, facilities and communication. An organizational procedure was evolved that would allow each city to identify an area or areas of interest that it could select within the categories enumerated and which would provide a basis for cooperative planning that could be modified to meet the needs of each city.

Examples of activities undertaken in this regard include a Midwestern Regional Conference that was addressed to the development of a proposal that investigated the present status of vocational and technical education teachers in relation to shortages, recruitment procedures and certification.

A Western Regional follow-up conference was addressed to the topic of formulating a "Career Development" curriculum plan and resulted in a document which outlined the philosophy, objectives, approaches and priorities for a multi-level "Career Development" curriculum.

A cooperative three-day conference was conducted with the Research Council, the Chicago Public Schools and the Illinois State Board of Vocational Education to assist Chicago in the development of educational specifications for a Career Development Campus. A rationale and statement of objectives for the Chicago plan for "Career Development Education" was written as a result of this activity and was presented to the Chicago Board of Education for consideration.

A proposal has been drafted by the Public Schools of New York City for the development of a curriculum for occupational education in the secondary schools of that city. The proposal stresses an interdisciplinary and flexible scheduling design.

San Diego is actively engaging in an evaluation survey of its total educational program. The purpose of the survey is to identify the direction for the development of curriculum changes that will embrace vocational education on the secondary level utilizing "Career Development" as a framework. A Career Development Advisory Committee has been formed in San Diego and is presently seeking to design a program that will enhance the San Diego school system and will meet the needs of all the students in that city.

The Research Council anticipates that vocational education will continue to be of concern to all member cities. To facilitate the investigation of this area of education, the Research Council encourages the initiation of research and development activities and will continue to serve as a center for the dissemination of materials.

SCHOOL FACILITIES

At the end of 1966, the Education Facilities Laboratories devoted its annual report to ". . . today's most perplexing problem in educational facilities—the schoolhouse in the city." In commenting on the *New Life for Old Schools* study, the report states:

> "Not every American city will be in a position to undertake vast construction programs to create new schools to meet the new challenges of urban education . . . Most will have to live with buildings of relatively recent vintage (and some of not-so-recent vintage) too valuable to discard but inadequate for the new educational programs they must house.
>
> "Recognizing that fact, EFL in 1964 inaugurated a self-administered project aimed at developing improved approaches to the modernization of outmoded urban school plants. The project, conducted in cooperation with the Research Council of the Great Cities Program for School Improvement, so far has sponsored an airborne tour of school renovation projects in four states and Canada, sponsored a series of conferences to explore creative solutions to the problem, and held an architectural design competition for the renovation of Chicago's Hyde Park High School.
>
> "The winning design, developed by Orput-Orput and Associates of Rockford, Illinois, reflects the project's objectives. The remodeled school will accommodate the latest teaching techniques and electronic teaching aids. At the same time, the remodeled structure will be easily adaptable to future changes in educational program. The heart of the redesigned school will be a

> resource and independent study center twice as large as the present library. And the school's little-used auditorium will be converted to include two large-group teaching spaces equipped with the latest audio-visual devices.
>
> "Future projects include a design study in Pittsburgh in cooperation with the Department of Architecture, Carnegie Institute of Technology, for the development of two prototype renovation schemes, one for an old school in a stable city neighborhood, the other for a school in a redevelopment neighborhood . . . Another design competition is tentatively scheduled for New York and two other cities in 1967. And a special project group has been formed to encourage industry to develop new building products suitable to renovation projects."

The Pittsburgh Design Study has come to a successful conclusion and booklets presenting the results are in preparation. A $2,000,000 architectural design competition is underway in New York with the program designed to introduce into a schoolhouse built for a traditional pattern of education the space and flexibility required to accommodate new concepts of the learning process which have been developed for the Intermediate School. The winning designs will be announced in mid-May of 1967 to coincide with the national convention in New York City of the American Institute of Architects.

Other member cities are meeting with the project director to discuss ways of cooperating with the project. The new product development group is currently developing guidelines for action.

A conference report, *New Life for Old Schools*, originally published in the spring of 1965, continues to be a popular document. A newsletter reporting on project development is mailed periodically to more than 1200 educators and architects. A report on the winning entries in the Hyde Park High School competition was published in the fall of 1966. A twenty-minute, sound, color motion picture was previewed at the Research Council's 1966 Fall Conference in Milwaukee. The film was featured at the American Association of School Administrators national convention in Atlantic City in February of this year and is now available for general showing. As of March, 1967, more than 130 requests had been honored representing an audience of 3000.

In late March staff representatives from the member cities met in Atlanta, Georgia, for a one-day session on "Research for Modernization." This meeting preceded a two-day conference in Atlanta of the Metropolitan School Facilities Planning Group sponsored by the U.S. Office of Education. The interest in the subject of school modernization is indicated by the requests for materials received by the Council from school officials in all parts of the world. Requests for information and letters of appreciation for the help derived from the research have come from all fifty United States, Canada, Venezuela, Puerto Rico, and European countries. The importance of the program is summarized in the concluding remarks of the EFL report cited earlier:

> "The schoolhouse in the city cannot by itself become the dominant element in urban social planning. But the schools, as reflected by the buildings in which they operate, can be a magnet to hold or attract those who have the choice. Or, they can speed the exodus and compound the urban issues with which the nation is grappling."

FISCAL POLICIES

The Research Council cooperated with Professor H. Thomas James and the United States Office of Education whose fiscal study, *Determinants of Educational Expenditures in Large Cities of the United States*, was completed during 1966.

Led by Professor James, Dean of Stanford's School of Education, the research group interviewed countless community leaders and city and school officials in the Great Cities. They also conducted extensive statistical analyses of data from 107 of the nation's largest school districts.

The following statement partially summarizes their findings

> The quality of education in a particular city depends more on what can be locally afforded and on what is locally demanded than on what is needed or ideally desired; until the means are found to reverse that equation and let social policy for education determine the revenues to be allocated to education, the continuing decline of the city is certain.
>
> Declining financial ability to support education and increasing requirements for educational services have placed the public schools of America's great cities in a double bind so serious that only drastic increases in state and federal aid can permit city schools to meet the educational needs of their pupils.

The discouraging picture of the economic ability of large cities to finance education must be considered in light of the known need for educational services. If, for example, school children in cities require far fewer educational services, and cheaper services, than other children, the fiscal problems would be partially counterbalanced. However, just the opposite is the case; cities face extraordinary demands for an expensive array of educational services required if tens of thousands of city children are to become productive taxpayers instead of welfare recipients.

In 1963 the Research Council set forth eight policies that offered promise for a solution to the fiscal need of the school systems of the great cities. Four years later these policies remain effective and promising but for the most part they have not been implemented.

They are as follows:

1. The financial support of public education should be a responsibility shared by all citizens and all levels of government.
2. The state program for financial support should *recognize* the complex needs of the city school systems but the *determination* of the needs should be the responsibility of the local boards of education.
3. The measure of the local school district's ability to contribute to the support of education should be in terms of the total burden of local government cost borne by the local tax base.
4. Local boards of education should be free from unreasonable restrictions in the administration of fiscal affairs, from undue controls by other governmental agencies, and from cumbersome legal procedures at state and local levels which thwart effective expressions of citizens.
5. The fiscal procedures for adequate school support should provide the school districts with direct access to taxes which can be administered best locally and indirect access to those which can be administered best at the state level.
6. The state fiscal plan should include objective procedures to provide adequate funds for operating expenses and capital outlay and debt service payments.
7. The federal government should participate in the support of education when the national interest requires it and when local and state resources are insufficient to provide an acceptable educational program.
8. The level of financial support of public education should be kept responsive to the fluctuations of inflation and deflation in the price structure of the economy.

These policies call for dynamic participation of all levels of government in supporting public education; these policies permit citizens complete access to their true economic ability; and finally, they provide for the equalization of tax burden for the support of public education.

The public school systems in the Great Cities face a crucial challenge to provide the kind of education that is necessary to meet the social, economic and technological changes taking place today in America. This challenge cannot be met without a renewed determination by the citizens. It cannot be met without adequate financial support to provide the school systems with the necessary vigor to accomplish the task expected of them.

STATE AND FEDERAL PROGRAMS

The Research Council acknowledges the increasing concern of all levels of government—local, state, and federal—in education affairs. Noting the potential of this development for service to the public interest, the Council has endeavored to promote an exchange of information between its members and interested parties at all governmental levels. In this regard, the Council has been particularly active in the areas in which it maintains on-going projects: vocational education, instructional materials, teacher education, the culturally deprived, school facilities and fiscal policies. It is hoped that these cooperative efforts will contribute to the continuous development of worthwhile education programs.

In its 1963 publication *Fiscal Policies to Meet the Needs of the Great City School Systems in America*, the Research Council of the Great Cities Program for School Improvement enunciated the following policy:

> "The federal government should participate in the support of education when the national interest requires it and when local and state resources are insufficient to provide and acceptable educational program.
>
> "These policies call for dynamic participation of all levels of government in supporting public education . . ."

Since that time there have come into effect several federal programs which have had as their purpose the curing of some of the disabilities in education which are peculiarly encountered in the Great Cities. These programs provided partial answers to repeated studies and reports made on behalf of this Council which pointed to the mounting numbers of children in the Great Cities, who, because of economic and cultural deprivation, could not hope to achieve educational equality with their peers without major supplementary opportunities beyond those customarily available.

Had revenues been available from local resources or from state grants, it must be assumed that these supplementary programs would have been in widespread operation without the federally suported programs. In fact, many efforts in this field had already been instituted in the Great Cities, but because of the inadequacy of available revenues these programs were of token nature. Such programs, along with others, provided the basis for the formulation of the federal Elementary and Secondary Education Act itself and the rules and regulations implementing that Act. Financing of these supplementations by federal participation is now a significant part of the operation of the schools in these cities.

This pattern of limited local and state resources with the resulting federal participation may be expected to expand in other directions. They have been expanded and amended in each succeeding session of the Congress. Educational legislation enacted by the 89th Congress will continue programs for the educationally disadvantaged through fiscal 1968. The 90th Congress will be faced with the critical problem of funding the programs authorized.

Educational legislation has been a major part of the Great Society program. The 89th Congress, in its second session, passed four major pieces of legislation that will have an effect on education.

The most dramatic legislative enactment providing direct benefits to the public schools is in the amendment and extension of the Elementary and Secondary Education Act, Public Law 89–10. This particular law, while related to the economically and educationally deprived youngster, effects almost every school district in the nation.

The other three enactments, the Economic Opportunity Act, the Higher Education Act, and the Demonstration Cities Act, all have elements that recognize that education must be part of the major thrust to upgrade the total society. The Economic Opportunity Act is limited largely to those areas that are impacted by poverty and falls under a dual administration with other units of government. The Demonstration Cities Act will affect from sixty to seventy of the largest cities in the nation and is noteworthy because of the requirement that education facilities and programs must be a major ingredient of any model city proposal. The Higher Education Act extends numerous benefits to all in our society who are interested in education beyond high school.

The Elementary and Secondary Education Act was enacted during the first session of the 89th Congress. This act was the largest single authorization ever made by the federal government for elementary and secondary education.

Title I of the 1965 Act authorized aid to school districts based on the number of children from low-income families and the average state per pupil expenditure for education. Title II provided aid for the purchase of text books and library materials; Title III authorized grants for supplementary communitywide educational centers to provide services that individual schools could not provide; Title IV the Cooperative Research Act; and Title V authorized funds to help strengthen state departments of education. The Act also extended the impacted areas program which provided funds for operation (P.L. 81–874) and construction (P.L. 81–815) of schools in districts where 3% or more of the children had parents who lived or worked on federal property.

INSTRUCTIONAL MATERIALS

Recognizing that traditional instructional materials are frequently inadequate for the needs of urban children, the Research Council organized a Committee on Instructional Materials in 1964. This group has encouraged the development and exchange of city-prepared materials and stimulated publishers to a greater awareness of urban curriculum demands. The Committee has established a close working relationship with American Textbook Publishers Institute and, in response to a request from them, prepared a report entitled *Suggestions for Instructional Materials Designed to Meet the Needs of Urban Youth.* Steps to implement this report and advance the cooperative relationship between the groups were taken at a joint conference in Los Angeles in November of 1965. The Council is currently concerned with applying the potential of multi-media materials and instructional television to urban school settings.

A recent report of the Committee on Instructional Materials made late in 1966, contained the following statement concerning educational television:

> Television serves an increasingly important role as a media for improvement of the educational programs of the Great Cities. The Committee on Instructional Materials believes that a cooperative approach directed toward a more effective use of educational television can be of value to the member cities.

Among the areas of mutual concern that the committee viewed as most promising for cooperative action by the Great Cities are:

1. The more effective use of the expanded services for television instruction which are offered by regional, state, and national agencies.
2. The efficient utilization of technological improvements in the programming of education television.
3. The development among member cities of a practical method of exchanging locally produced video taped lessons and accompanying teacher guides.

In addition to television, and computer assisted instruction, the use of video tapes and other technological advances in the area of education were among items of concern at the Joint Conference of the Great Cities Research Council and the American Textbook Publishers Institute in Los Angeles in 1965. The following statement from one of the summation speeches of the Conference indicates the direction the activity of the two groups may take in the future.

> Another challenging aspect of the conference was the forecast concerning what instructional media will be like in the future. Computer instruction is just around the corner, and it is now being utilized by airlines and the armed services. It was pointed out that within five years, computerized instruction is going to be financially feasible for use in the public schools of this country. The idea of making video tapes and films immediately available on a screen to pupils and teachers from a central location hundreds of miles away is just about to be implemented. New types of test scoring machines and even a talking pen are now available.

Dr. Everett Chaffee, Associate Superintendent, Division of Instructional Services in the Los Angeles School Districts, speaking for the Great Cities at the Conference made the following statements regarding the work of the Research Council and the American Textbook Publishers:

> Tremendous strides have taken place in the last year or two in the availability of materials to meet the needs of urban areas. New York City, for example, has prepared a list of more than 200 separate textbooks which depict American cities as they really are and devote proper attention to racial and ethnic groups. There is ample evidence that publishers are making a serious effort to implement the suggestions made in our publication *Instructional Materials To Meet The Needs Of Urban Youth.*
>
> Those of us in education are aware of the fact that the textbook must now be supplemented by audio and visual aids and various other media. As you talk to the publishers, it is very evident that they are very conscious of this fact. For example, the statement was made that publishers are not committed merely to what is placed within the covers of a conventional book. They are interested in publishing ideas, regardless of how they are packaged.
>
> As a result of discussions with publishers, we are convinced that new procedures must be formulated for more effective evaluation and selection of educational materials. Textbook industry representatives have told us time and time again that "your processes are too slow: they are antiquated; they are not coordinated." For example, it is now often necessary not only to adopt a textbook but also the films, soundstrips or records which accompany it. Many of us have not made the necessary adjustments to coordinate the evaluation of the various elements in this type of instructional materials package. Present textbook adoption procedures are often too slow in a rapidly changing era. We in the Great Cities need to work on this problem and to establish more effective procedures for evaluation of textbooks.
>
> We are also convinced that more funds must be made available in a more rapid manner for the purchase of newly marketed instructional materials. Evidence clearly points to the fact that these materials fail to receive their share of the educational dollar. It is not too unrealistic for schools to

spend from $30 to $40 per pupil in place of the present inadequate $5 to $10 for this important aspect of instruction.

The challenge facing both publishers and educators was stated by Dr. Kenneth Lund, Senior Vice President of Scott, Foresman and Company in the closing remarks of the Conference.

> The challenge for the publisher is to produce materials that would help children and teachers to know each other, to tolerate each other and most of all to appreciate each other. Unless this can be accomplished, some of our big dreams for education will certainly go unrealized.
>
> It is possible to train children on occasion to do most things. However, I think publishers and educators must continually assess our practices and determine appropriate tasks for children, not because they are possible, but because they are appropriate.

The excellent rapport existing between the educators and the publishers is such that they are truly partners in the educational enterprise. With this background of experience in dealing with private industry, the Research Council hopes to move forward in the future in an effort to bring the resources of television, computers and instructional materials to bear on the problems of education in the Great Cities in a combined effort.

EDUCATION COMMUNICATIONS

The Educational Communications Project will assist the member school districts of the Research Council in the coordination of research and development efforts to meet their communications information needs. The project will be conducted in several parts. The first part will consist of a status study of the current use of computers, television and various resource materials being used by each of the Great Cities. At this time an inventory of the computer equipment and a survey of computer programs has been made. An inventory of the use of educational television is currently underway, as is a study of instructional materials being used by the large cities.

Phase II of the first part of the study calls for the creation of several task forces consisting of specialists in the several areas from member cities. These task forces have been formed to consider (1) computers and data systems, (2) instructional television, (3) instructional materials. The focus of these task forces will be on significant problems related to the development of an adequate communications system within and between member school systems. In addition to the three task forces, a committee will be formed to coordinate the efforts of the Educational Research Information Center (ERIC). It will be the job of the task forces to seek agreement on priorities, problems and needs in the development of an educational communications system that will integrate the use of computers, instructional television and resource materials.

With the information available from the inventories and the task force reports, it will be possible to plan an approach to a feasible, educational communication system that will enable the Great Cities to engage in the development of such a system on a cooperative basis; thereby, making the system economically feasible and saving time.

MONITORING EDUCATION

As Title I Projects were being evaluated at the end of the first year of the Elementary-Secondary Education Act, it became quite evident that one of the weaker segments of the program was that of evaluation. There appeared to be a need for a continuing evaluation process that would allow the school to keep tuned-in to the progress of the individual pupil, as well as groups of pupils, as they continue to move through the educational system. It was obvious, working with groups of low-income children in the central cities, that existing methods of evaluation did not tell the whole story for this particular group of children.

In the fall of 1966, the Research Council authorized the development of a project to improve the evaluation methods currently being used in the Great Cities. The plan now under consideration is to develop strategies of monitoring the learning process by the use of all pertinent information that is obtainable on each student. This information may be obtained in a variety of ways, and may be objective or subjective. It will be analyzed for the purpose of determining pupil progress with emphasis on planning his future educational program to overcome his deficiencies.

FINANCIAL REVIEW

	Year	Revenue	Disbursements
	1963	$ 53,355.34	$ 39,208.27
	1964	49,149.75	44,897.01
FIVE YEAR REVIEW	1965	118,760.23	88,919.04
	1966	215,468.65	209,715.57
	1967*	369,135.68*	314,056.26*

Statement of income and expenditures—1966

Revenue:	
Membership Fees	$70,000.00
Consulative Services	525.00
Education Facilities, Laboratory	103,900.00
Standard (Indiana) Oil Co.	5,000.00
U.S. Office of Education	30,104.91
Publications	2,077.77
Interest	3,860.97
Miscellaneous	----------
Total	215,468.65
Disbursements:	
Council Operations	68,995.74
Vocational Education	59,641.06
School Facilities	81,078.77
Total	209,715.57

*The above report has been compiled from the audit reports of Arthur Young & Company, Certified Public Accountants, except the information for the 1967 fiscal year which is from the 1967 budget of the Research Council.

Mr. PUCINSKI. Now, our witnesses this afternoon are going to include several students of various vocational and technical schools. I know that sometimes educators can be very concerned when we do this, but I think it is important to hear from the students themselves to see what are some of their reactions and what are some of their evaluations. So we are going to start out at 2 o'clock with this particular panel.

Then later this afternoon, we are going to have Mr. Thomas J. Nayder, Secretary-Treasurer of the Chicago Building Trades Council. He plays an important role in the development of skills and trades. And we will have Mr. John Desmond of the Chicago Teachers' Union and Mr. A. N. Landa, Director of Welfare Rehabilitation, and Mr. A. Louis Scott, Director of Project Breakthrough, and winding up our afternoon session will be Dr. Salvatore G. Rotella of the Loop campus, Chicago City College. So it is my hope that by the end of the hearing today we will have a pretty good idea of how this legislation can help the various programs now being developed and already undergoing programs in the city of Chicago. The committee will stand in recess until 2 o'clock this afternoon. Thank you.

(Whereupon at 12 noon, the subcommittee adjourned to reconvene at 2 o'clock in the afternoon.)

AFTERNOON SESSION

Mr. PUCINSKI. The meeting will come to order. We will resume our discussions of H.R. 8525, the Vocational Education Improvement Act of 1967, and our first witnesses this afternoon are a group of students who attend various Chicago vocational and technical schools, and, Dr. Lehne, do you know who is going to introduce the young people?

Dr. LEHNE. Mr. Koerner.

Mr. PUCINSKI. Perhaps you will want them to come up as a group, or perhaps you can break them into a small panel or any way you like.

Dr. LEHNE. If we could we would like to bring two up at a time and they will give their name and address and the school they are from and tell you their thoughts in relation to the program. I told them, Congressman, this is the first time in my memory where a congressional committee has gone directly to boys and girls and asked them about the program, and I think they are pleased to be here.

Mr. PUCINSKI. The purpose of these hearings is to visit the various communities in the country and get the reaction of the people who live and work with the program. We so often get only professional testimony in Washington, and sometimes we can't see the forest for the trees. We are hopeful that by meeting these young people this afternoon we will get their own viewpoint of the programs they are in and we are hopeful they will be frank with us. I am sure we realize that they probably have been carefully selected by the school officials, but we are hopeful they will be frank and tell us what are the strengths and what are the weaknesses of their present program because we really can't legislate, and we can't bring help to the communities if we are going to hear only the good things about a program.

This legislation is designed to help the vocational programs all over the country, and so we are going to ask the young people to perhaps, if they wish, put away their prepared statements and just tell us in their own words how they feel about their particular programs. If there is something wrong, we would like to know about it because then we can try to get together with the appropriate authorities and correct whatever shortcomings there may be in the program. On the other hand, if there is something particularly good about the program, perhaps the rest of the country can benefit by their testimony.

STATEMENT OF KATHLEEN M. FLAHERTY, STUDENT, JONES COMMERCIAL HIGH SCHOOL, CHICAGO

Miss FLAHERTY. Good afternoon. My name is Kathleen Flaherty, 7710 South Damen Avenue, Chicago, Ill., and I am the representative from Jones Commercial High School.

Congressman Pucinski has asked me to be frank, and I will be; but I must admit that I was chosen for this because I am proud of my school.

Jones Commercial, Chicago's only all-business high school, is located a few blocks from the heart of the Loop, on the corner of State and Harrison. Jones is a citywide high school dedicated to the training of "Girl Fridays." At Jones, we offer young men and women who have completed 2 years of high school and who meet our standards, the opportunity to major in stenography, bookkeeping, business machines, data processing, marketing or key punch. Jones stresses perfection in all areas: Secretarial skills, grooming, and personality. Training is rigorous, but it pays off in the recognition we have received from the businessmen in the Chicago area, a recognition that has resulted in top jobs for Jones' students.

The educational program of Jones is unique. It covers all the facets of office work as well as English and social studies. In English classes, grammar and correct spelling are emphasized as a must for the future officeworker.

Seniors at Jones are employed on the school's cooperative work program, the first such program put into effect in a Chicago school. These girls attend classes half a day and work for school credits and current wages the other half. The credit for this program is required for graduation.

Jones' grooming program has made the student body well known in the Loop area. Our hats, heels, and gloves have become the symbol of the good taste in business dress that is cultivated at Jones.

Jones' personality program was begun in 1942 by our director, Mr. Clarence Carey. This program was developed from studying surveys taken of employers concerning their desires in the realm of employee personality. The effectiveness of our entire program is proved by the fact that our placement office receives approximately 10 calls for each graduate. Our students are working in such places as the mayor's office, the offices of the public defender and of the public aid department, the daily newspapers, and the Chicago Board of Education.

A happy Jones family moved into its new home on February 20, 1967. It was designed to create a modern business atmosphere and contains 35 classrooms and special machines rooms. Three elevators are available for the use of the faculty and the student body. Adjoined to our main building is a smaller one containing the 500 seat lecture hall and grooming and personal improvement labs, equipped with shampoo basins, dressing rooms, and facilities for modeling. The choral room and the 450-seat cafeteria are also in this unit. A mall connects the two buildings and forms the student lounge area. The third building in our three-building complex is a gymnasium which is being constructed on the site of the old Jones building which has recently been razed. Thank you for your attention. It has been a privilege for me to represent Jones, the school of which I am so proud.

Mr. PUCINSKI. Thank you for your very fine statement. I am sure that if all the rest of the girls at Jones are as competent and as poised as you are, you will have no problem in placing young women in industry. Earlier today, the question was raised as to why there are not the greater proportion of young ladies at Jones of the various minority groups, and, of course, you wouldn't, I don't think, have the answer; but I might have it for the record in a statement of Dr. Lubera. He told us during the lunch hour that one reason was the old Jones School was really a pretty sad place and nobody wanted to go there, I guess. The new Jones School has doubled the capacity from 600 to 1,100, and Dr. Lubera has advised our committee that the doubling of the capacity and making the whole school much more attractive is going to produce a greater student body at the school from both white and nonwhite communities. He pointed out that they are putting out a big educational campaign to accomplish this. I suggested to him that he might get some billboards from Foster and Kaiser and put on a big campaign to promote the Jones Girls the way they have the Kelley Girls and the various other secretarial services, and I am hoping that in the next few weeks the gap is going to be closed, which I am sure it is; but one thing I was very happy to hear you testifying about, we have thousands of young women who visit Washington every day with their school classes, and I emphasize to every one of those classes the importance for young women to learn a secretarial skill.

A lot of young women think they are going to get married and they won't need it, but a woman never knows when she is going to become the breadwinner. Her husband may die prematurely, or a number of things might happen. So I think it is a source of great self-assurance for a young lady to have a skill she can fall back on in the event she has to become the breadwinner of the family, and I would like to congratulate you for seeking to achieve this goal. How long a course do you have at Jones?

Miss FLAHERTY. Two years, junior and senior year.

Mr. PUCINSKI. And these are young ladies from all over the city?

Miss FLAHERTY. Yes.

Mr. PUCINSKI. The school is now only half full; you have a capacity of 1,100, and there are only 600 students.

Miss FLAHERTY. Well, we are only half full because we transferred from our old building in February, and we took the girls from our old building which were only 600 pupils. We expect to have a capacity of 1,200 students soon.

Mr. PUCINSKI. Dr. Lubera said the school system is now in the process of a huge recruiting citywide campaign to get more young ladies. Is there any shortcoming in the school that you can think of?

Miss FLAHERTY. Well, a lot of the girls complain because the schedule is tough. We have a lot of homework, and we carry a lot of subjects; but we have to, because at Jones they train you for every kind of office work you are going to come in contact with, and they have to prepare us for it, so we carry a lot of courses.

Mr. PUCINSKI. Very good.

Mr. HAWKINS. I might ask one question. Probably it isn't as silly as it sounds. Why no boys at Jones?

Miss FLAHERTY. I think because Jones now—there are so very few boys, when a boy takes a tour and sees 600 girls and five boys, it discourages him a little bit.

Mr. PUCINSKI. Do you have five boys?

Miss FLAHERTY. Yes.

Mr. HAWKINS. Then you do intend to, I suppose, change the policy on that?

Miss FLAHERTY. Jones is a coeducational high school, but most boys don't seem to come in great numbers.

Mr. HAWKINS. When you enrolled at Jones, were you required to take a test? How were the persons selected in the first instance?

Miss **Flaherty**. If you want to go to Jones, you fill out an application form, and you have to complete 2 years of high school. They have a certain list of requirements. I think it's a good average in your studies for the first 2 years. Then they send you a letter of acceptance or nonacceptance. You take a test in the summer. It's really a placement test, and they determine which course you are best suited to take, stenographic or bookkeeping, et cetera, but there is no test before they accept you. It's after you are accepted that they test you.

Mr. **Hawkins**. What was your interest at first? Were you recruited, or did you voluntarily go to Jones, let's say, go and take the test?

Miss **Flaherty**. Well, I became interested in Jones because it is a tradition in our family. I am the third girl in our family to go there.

Mr. **Hawkins**. You were encouraged by the family to go?

Miss **Flaherty**. Not really. No one ever pressured me either way, but I wanted to go, and I went and signed the application form and took the test; and I am a stenography major.

Mr. **Hawkins**. Just how were you selected to testify today? Was it because of your grades, your willingness to testify, or just how?

Miss **Flaherty**. I really wasn't told. I am in the honor class, but I am not in the top 10 students.

Mr. **Hawkins**. You are just average?

Miss **Flaherty**. Well, I am an honor student. I am an average student of the honor class.

Mr. **Hawkins**. Thank you very much.

Mr. **Pucinski**. I want to congratulate you and your faculty. I can only repeat what I said before, if all the young ladies at Jones have your composure and poise, I'm sure you will all get excellent jobs. I think this is a reflection of your fine school.

STATEMENT OF ROBERT NEMETH, STUDENT, CHICAGO VOCATIONAL HIGH SCHOOL, CHICAGO

Mr. **Nemeth**. My name is Robert Nemeth. My address is 2125 East 98th Place, Chicago. My school is the Chicago Vocational High School, and I am one of many people who attend this vocational school, and I am proud too, due to the many opportunities that it offers. Many students for various reasons must plan on a career after they have completed their high school education. The education they obtain at a vocational school gives them experience comparable to on-the-job training. Because of the practical value of a vocational education, the adult world doesn't appear to be as unfamiliar as it could be. The vocational school also prepares the college-bound student such as myself. The college courses are becoming exceedingly more difficult, but a student may help himself with college grades by the vocational background he has received in a vocational school. The student in a vocational school is taking part in a controlled study in a specialized field. He is undertaking a regulated investment of knowledge through reading and the many courses that are offered in a vocational school.

I am an electronics major and am, therefore, qualified to say there are many, shall I say, "fried fuses" during the course of the day. My classmates and I participate in much experimentation. Projects teach students with this knowledge to develop their talents. He learns the proficiencies of his trade and he is able to demonstrate his craftsmanship and originality.

During the summer, due to the vocational education I have, I am qualified for a job with IBM, and I am very pleased to get this job.

Now, the only thing that I find wrong with a vocational school, although it may sound different, I think a language course should be put into the curriculum of a high school student to prepare him to go on to college.

Mr. **Pucinski.** I believe this is being done. Isn't that true?

Dr. **Lehne.** This is now the policy. We want to be sure all the programs in the school will let everyone go as far as their aspirations and abilities can carry them. Our programs are broad.

Mr. **Pucinski.** In other words, what you are trying to say, is a student who does want to go on to college or may be motivated during his experience in the vocational school should go on to college even though he may not have intended to do so when he started; that he can get an appreciable background in his vocational educational program; is that correct?

Mr. **Nemeth.** Definitely. I think he should be prepared for all facets of life, and that would include a job immediately after high school if he so desired or a college education after completion of his high school education.

Mr. **Pucinski.** How were you directed to this vocational high school?

Mr. **Nemeth.** When I was in grammar school, I liked electronics quite a bit; and to tell you the truth, I liked to see what made things tick, and the Chicago Vocational School had an extensive course in electronics where, in the last 2 years, you were able to put in four periods a day. Because of this, I attended Chicago Vocational High School, and as I went through the many opportunities that came to me such as extra courses in math, science, and chemistry, et cetera, this qualified me for college.

Mr. **Pucinski.** But what was there—I don't suppose there was a counselor at the elementary school?

Mr. **Nemeth.** Yes, a counselor from Chicago Vocational High School came to the elementary school I attended, and he helped us fill in our application blanks, and he told us about the things that were going on.

Mr. **Pucinski.** That is what attracted you to the school?

Mr. **Nemeth.** Yes.

Mr. **Pucinski.** This legislation we have before us would make substantial funds available for a greater degree of this kind of counseling and training of counselors and available teachers. I am pleased to learn that they do have counselors that go into the elementary school and seek out students that are adaptable to this kind of training. Thank you very much for your interesting comments.

STATEMENT OF JOHN LOGGINS, STUDENT, WESTINGHOUSE AREA VOCATIONAL HIGH SCHOOL, CHICAGO

Mr. **Loggins.** Congressman Pucinski, Mr. Hawkins, and Dr. Lehne, I am John Loggins, and I am a student at Westinghouse Area Vocational High School. Westinghouse Area Vocational High School is open to all students throughout the Chicago area. Westinghouse is a new school. It just opened in September of 1966. I was formerly a student at John Marshall. The reason I transferred to Westinghouse was because I wanted to get a vocational education, a vocational education that John Marshall didn't offer. Westinghouse, I must admit, is in a low-income community, and it is very important that Westinghouse be successful as a high school because everyone would like to be proud of the high school they come from, and parents like to be proud of their son or daughter who graduates from a high school that prepares them for the world.

I am majoring in electronics; but at the present time, I am taking appliance repair, and I hope to go into electronics class this September.

Mr. PUCINSKI. What were you studying at Marshall High?

Mr. LOGGINS. I was taking college preparatory classes such as French, English, regular academic subjects.

Mr. PUCINSKI. Have you noticed any improvement in your grades between Westinghouse and Marshall High?

Mr. LOGGINS. Definitely. At Marshall High School, I was mostly a C student, and now at Westinghouse I am an A student on the honor roll; and I find that maybe it is because of the—well, when I was at Marshall, I had an interest in high school but not as great an interest as I have at Westinghouse.

Mr. PUCINSKI. It's pretty hard to have an interest in anything at Marshall, isn't it?

Mr. LOGGINS. Marshall isn't as bad as everyone thinks it is.

Mr. PUCINSKI. But it is crowded?

Mr. LOGGINS. Yes. And it is different at Westinghouse as most of the classes are small in number because the school has just opened. I want to get more out of the class. The students are freer to express themselves, and the teachers have more time to take in our subjects.

Mr. PUCINSKI. Marshall must be a pretty good school despite all its troubles because one of my secretaries recently left me and went back to teaching at Marshall, so it must have some good things over there.

Mr. LOGGINS. I am not contradicting Marshall now, but it is just that I like Westinghouse.

Mr. PUCINSKI. That is interesting, and you attribute this to what, a closer relationship between yourself and the teachers and the smaller classroom, or is it because you find you have more things of particular interest at Westinghouse that you didn't have at Marshall?

Mr. LOGGINS. At Westinghouse you are getting more for the future. You are taking an interest in your future as an individual. At Marshall, it seemed like I was just another person going out into the world with only an academic education; but at Westinghouse, I will have a skill, a vocation.

Mr. PUCINSKI. Do you plan to go on to college?

Mr. LOGGINS. Yes, I hope to go to an academic college and finish in electronics.

Mr. HAWKINS. Did I understand that you transferred because of an increased interest in something vocational rather than being counselled to transfer? Just when did you make this decision and why?

Mr. LOGGINS. I made this decision in my sophomore year. I was taking college preparatory courses, and there were other vocational schools on the West Side, and that was the only boys' school, and Flower is for the girls; and I made this decision because I was beginning to think about the future and what the future was going to hold for me. I wanted to learn a trade and to go out into the world knowing something.

Mr. HAWKINS. Did someone assist you to make this decision, or did you do it all by yourself?

Mr. LOGGINS. I made this decision on my own.

Mr. HAWKINS. Were you ever counseled at Marshall as to the advantages of a vocational school as compared to just an academic course?

Mr. LOGGINS. No, I wasn't. It's hard to understand. It was said, "If you go to a vocational school, it's not college preparatory, and Marshall is a school that will prepare you for college."

Mr. HAWKINS. You were only making a C grade. Was this because you didn't have an interest in academic courses, or was it, do you believe, due to a lack of interest as to the type of teaching that there was at Marshall? Just why the low performance at one school and the superior performance at the other?

Mr. LOGGINS. I think it's the general attitude at the other school. I find that at Westinghouse the students there have a desire to learn, and, therefore, I wanted to get with things and learn as much as possible; and, therefore, I apply myself more.

Mr. HAWKINS. You think there is a general atmosphere at Marshall that somehow caused you not to produce as fully as you might?

Mr. LOGGINS. No, there wasn't a general atmosphere because the students at Marshall were interested in learning, but there were a lot of different things that got or stood in the way.

Mr. HAWKINS. Such as?

Mr. LOGGINS. Many extracurricular activities.

Mr. HAWKINS. Do you think these interfered with you somehow in getting a higher grade than C?

Mr. LOGGINS. I think so.

Mr. HAWKINS. Were you being encouraged academically, or were you being encouraged away from academic learning into sports and other activities?

Mr. LOGGINS. No, it was just that I wanted—I felt in my sophomore year I wasn't being prepared enough to go out into the world of work.

Mr. HAWKINS. Did you discuss this with your counselor, your teacher, or anyone?

Mr. LOGGINS. No, I didn't.

Mr. HAWKINS. Just why did you select Westinghouse?

Mr. LOGGINS. Because it appealed to me. They passed out pamphlets about the school showing what they offered and how you could finish taking your academic classes and go to college if you wished. It seemed to me that it was perfect; and so I decided to go there and learn electronics.

Mr. HAWKINS. Do you think there is a distinction within the school system based on ethnic factors? Do you believe that colored kids are getting the same counseling, the same quality of education, the same encouragement that the whites are getting?

Mr. LOGGINS. Mostly. The schools that I have been to were overcrowded, and to see a counselor was a big deal in itself. I know at Marshall to see the counselor, the counselor's office was always filled with other problems, and they really didn't have the time to discuss your problems fully with you.

Mr. HAWKINS. Have you always attended schools that might be described as Negro schools; that is, in terms of the majority of the enrollment?

Mr. LOGGINS. You mean overcrowded schools?

Mr. HAWKINS. Yes.

Mr. LOGGINS. Yes, I have.

Mr. HAWKINS. Well, I would like to commend you on the great progress that you are making.

Mr. LOGGINS. Thank you.

Mr. PUCINSKI. I think you made a very significant contribution, young man. I am not sure that you quite realize it. You have brought out one important thing which many of us in Congress have been saying, but I don't think we have ever really had the firsthand knowledge as you have brought before this committee.

Had there not been a Westinghouse, and had you not been attracted to Westinghouse, the chances are pretty good that you probably would have completed your third and fourth year at Marshall and then probably you would be denied opportunities the rest of your life. The fact that there is a Westinghouse Vocational School and the fact that you were attracted to it is what is important here. I must say, you should have been attracted to it much earlier by counseling, and obviously you didn't have the right kind of counseling at Marshall. But the important thing here is you have emphasized the need for this legislation in two ways. The fact that when we take a young fellow from a crowded high school such as Marshall who is only a C student and just barely staying afloat and put that student into a good school like Westinghouse where there is a great deal of motivation and there is a program which lets you look ahead and gives you hope and a reason to believe that you are going to go on to college and you are going to go into the engineering profession, we then see your grades jump from C to A. So I would say that your testimony clearly demonstrates that there is a great deal of intellectual capacity in the young people in this city and all over America that is being frustrated and wasted to a great extent simply because they don't have the opportunity to give that intellectual capacity a chance to find its level.

I am most grateful to you for your testimony, and I am impressed by the fact that, given the tools with which to work, as you obviously were given at Westinghouse, you have increased your grades from C to A. But more important is the fact that you now have and you believe that you will be qualified to enter an institution of higher learning and go on to college. If we have accomplished nothing else on this visit to Chicago, I would say that your testimony is extremely important in evaluating this basic element of the legislation before us. I want to thank you and wish you a lot of luck. Thank you. Next witness.

STATEMENT OF FREDERICK WINSTON, STUDENT, DUNBAR VOCATIONAL HIGH SCHOOL, CHICAGO

Mr. WINSTON. Good afternoon, gentlemen. My name is Frederick Winston, 5035 South Indiana Avenue, Chicago, Ill. I am currently at Dunbar Vocational High School. I am majoring in electronics.

Now, I would like to stop here and say that I did not come prepared to give you an outline of the curriculum offered by my school, but I hope that by my explaining to you why I decided to attend this school and the opportunities they have to offer, you will be able to determine what a wonderful school this is. My future ambition is to ultimately become an electrical engineer, and this is why I am attending a vocational school. I chose Dunbar as the school that I am attending because former members of my family had attended this school and had successfully gone on to attain the goals which they had set out to achieve in life, and this is what I expect to do.

Mr. PUCINSKI. Well now, you were attracted to Dunbar because of your family background; your parents attended there; is that it?

Mr. WINSTON. Yes.

Mr. PUCINSKI. But now what school had you been attending before you went to Dunbar?

Mr. WINSTON. I was going to Vincennes Upper Grade Center.

Mr. PUCINSKI. And did you get any counseling there? Did you get any advice while you were at the Vincennes Upper Grade Center? Did you have occasion to meet with counselors who could guide you along in making a decision on where to go once you left there?

Mr. WINSTON. Counseling was offered at this particular school, but my family and I felt that Dunbar would offer a better opportunity for me if I went there; and, seeing that I did like electronics and tinkering with electrical equipment, I thought this would best serve my purpose if I did attend Dunbar.

Mr. PUCINSKI. You are studying electronics at Dunbar?

Mr. WINSTON. Yes.

Mr. PUCINSKI. Do you have the necessary equipment and the various academic aids to move you along in your course and your program?

Mr. WINSTON. Yes, we do. We have modern equipment. You supply your own handtools, buy your manuals and you move along in the course as fast as you can. It is mainly up to the individual as to which speed you are going to go; but the teacher is always there to assist you if you need help.

Mr. PUCINSKI. How many students do you have at Dunbar?

Mr. WINSTON. I don't know for sure.

Mr. PUCINSKI. Is it very crowded?

Mr. WINSTON. No, the school I wouldn't say is overcrowded, but we have a sufficient amount of students there.

Mr. PUCINSKI. Of course, I presume your parents went to the old Dunbar?

Mr. WINSTON. No, my brothers and sisters went to the new Dunbar.

Mr. PUCINSKI. That is one of the newest schools in the city. Is it pretty good?

Mr. WINSTON. Yes, it's all right.

Mr. PUCINSKI. All right.

Mr. HAWKINS. I think you better stop there.

Mr. PUCINSKI. Well, we want to thank you. You state you also are planning to go on to college; is that it?

Mr. WINSTON. No, I didn't say that, but I am planning on going on to school, not to an academic college. I want to go into a college that will offer, more or less, a preparatory course for the field I want to go into. If you were to ask me if I wanted to further my education in the study of electronics, I would say yes.

Mr. PUCINSKI. I see. And, of course, you feel, I take it, that the experience that you are having at Dunbar is giving you the basic foundation?

Mr. WINSTON. Yes.

Mr. PUCINSKI. When you leave Dunbar, do you feel you will have sufficient background, even if you were not going to pursue any further supplemental studies in electronics, so that you could move into a reasonably good spot with the experience and the knowledge and the training that you are getting at Dunbar?

Mr. WINSTON. I believe I could, and I will try and work my way up. If I did not go to college, this is what I want to do.

Mr. HAWKINS. Mr. Winston, what type of assistance are you getting at Dunbar? Are you getting any student assistance, NYC work study, any financial assistance?

Mr. WINSTON. No, no. This is a public school.

Mr. HAWKINS. Would this be important to you as to whether or not you will complete your studies there and go on to something else?

Mr. WINSTON. I am not quite clear on what you want to know.

Mr. HAWKINS. Well, I assume that your family is helping you.

Mr. WINSTON. Yes, my family is supporting me. I am living with my family.

Mr. PUCINSKI. Do you know if any of the young fellows at Dunbar who are not, perhaps, as fortunate as you in terms of having a family that can help you financially, are they in any work study programs, or are they getting any assistance out of the Neighborhood Youth Corps or any of these programs?

Mr. WINSTON. Yes, they have NYC programs. If a student feels he needs financial support and he wants to work out of the school, they have programs set up around school on a work-study basis.

Mr. PUCINSKI. I am not sure you can answer this question, but perhaps you can. Is there an appreciably high dropout rate at Dunbar?

Mr. WINSTON. I wouldn't know.

Mr. PUCINSKI. As far as your friends are concerned, did most of your friends stay with the full course as you did, or did you see them dropping out along the way?

Mr. WINSTON. Well, from my freshman year to where I am now, no, all the students I know are still there.

Mr. PUCINSKI. I am not sure that you are qualified to answer this question either, but please offer a judgment if you can. Do you think that this would hold true if these boys were not attending a vocational school but rather a normal high school?

Mr. WINSTON. I am not qualified to answer that type of question.

Mr. PUCINSKI. Okay. Thank you very much for your testimony. I think all you young people are giving us a pretty good insight into some of the things that are happening in some of these schools. Thank you very much.

STATEMENT OF JAMES L. HALEY, STUDENT, COOLEY VOCATIONAL HIGH SCHOOL, CHICAGO

Mr. HALEY. Good afternoon. My name is James Haley, 534 West Division Street, and I am the representative from Cooley Vocational High School. I attend a vocational high school because of two reasons. The first is that a person in a vocational school can receive more training in the field in which he has the ability. The second reason is because of the motivation or ambition, because I always wanted to become a professional printer because to me it is enjoyable work. It is work that pays a good salary, and I think everyone should have a job that he enjoys and where he gets a good salary. Well, I learned while attending Cooley a great deal about the printing system. I was encouraged by my shop instructor to apply to some institution of higher learning, and I was accepted by a southern Illinois university, and this refutes the old student belief that a person who attends a vocational school cannot attend college. Cooley is a fine school with unlimited opportunities in a vocational field; but the building is old, and its facilities are outdated, but this is no real problem because the bricks and mortar can be renovated, and the equipment can be replaced. Nevertheless, many people who are now successful in businesses have graduated from Cooley, and we know this is no real problem.

My main idea as to the improvement of vocational education is to provide shops with teachers who have had practical experience in industry to qualify them to teach a vocational shop course. Thank you.

Mr. PUCINSKI. In the machinery and equipment that you are using at Cooley in the printing trades, is this equipment as far as you know equipment that is now generally being used in the trade, or is it rather obsolete, somewhat archaic, in terms of the present structure of the graphic arts?

Mr. HALEY. Well, it's—a person can be trained by this equipment; but as far as the present condition in the printing industry, you could say they are obsolete.

Mr. PUCINSKI. The bill that is before us will provide substantial funds to help schools like yours develop new and innovated techniques in vocational education. On the basis of your own experience at this school, do you think if we made the funds available for developing new teaching techniques in your particular trade that we might make the programs even better than they are?

Mr. HALEY. Well, if you are hinting at what I said about teachers——

Mr. PUCINSKI. Well, not only the teachers, but the techniques. The methods.

Mr. HALEY. Would that improve the education?

Mr. PUCINSKI. Yes.

Mr. HALEY. Yes, I believe it would because most of the students would go to another high school because of the reputation that Cooley has. That will just send them away.

Mr. PUCINSKI. I didn't get that.

Mr. HALEY. Most of the students, as they are eighth graders and going into high school, they will turn away from Cooley because it has developed a bad name because it is an old school and the equipment is not as new as some of the other schools, and they turn away from it for that reason.

Mr. PUCINSKI. I was interested in what you said, that the brick and mortar can be renovated, but you really need new equipment and new machinery in there, and this legislation is designed specifically for that purpose, so I am happy to get your reaction to this.

Mr. HAWKINS. When you say the school has developed a bad name, what do you mean? Is this a bad name from the physical structure or a bad name from the behavior of the kids, the quality of education, or just what?

Mr. HALEY. When I say a bad name, I am not referring to the quality of the education. I am talking about the behavior of the students and the building itself.

Mr. HAWKINS. Did you receive any counseling before you went to this school and entered into the vocational shop?

Mr. HALEY. Well, when I was in the seventh and eighth grades, I was in the Upper Grade Center, and I received no vocational counseling. They told me to go to another school; but like I said, I always wanted to become an apprentice.

Mr. HAWKINS. Go to another school? Why?

Mr. HALEY. To go to an all-academic high school because they said I had a large potential and I couldn't develop it at Cooley, but that's where I decided to go.

Mr. HAWKINS. You decided against your counseling?

Mr. HALEY. Right.

Mr. HAWKINS. Did you receive financial assistance of any kind, or do you need financial assistance?

Mr. HALEY. To help me?

Mr. HAWKINS. To help you through college.

Mr. HALEY. I am going to apply for a student loan, and I am getting a scholarship.

Mr. HAWKINS. You are a good student then, in other words?

Mr. HALEY. Well, I don't know.

Mr. HAWKINS. Thank you very much.

Mr. PUCINSKI. Thank you.

STATEMENT OF BETTY BARRETT, STUDENT, FLOWER VOCATIONAL HIGH SCHOOL, CHICAGO

Miss BARRETT. Good afternoon. My name is Betty Barrett, 1228 South Keeler Avenue, and I am a graduating senior at the Flower Vocational High School.

Flower is a vocational school where a girl can prepare herself for a business career, a home economics career, or a commercial career. Because of our basic program, many girls who wish to do so, may continue their education in college. Many students go to junior college, as I am planning to do, to perfect their technical skills. In addition to the office occupational program, we have two other programs, distributive education, and the cooperative work training. These provide supervised work experience in other fields. The distributive education prepares them for the many jobs involved in retail merchandise. The office work training program provides training for jobs of office and sales.

My major is business, and I am a member of the Cooperative Study Class and Office Occupation which means I go to school half a day and work the other half. At the present time, I am working at Homemakers Industries, 3300 West Franklin Boulevard, where I am doing general clerical work because my future goal is to become a private secretary. I will attend Loop Junior College in the evenings where I will take shorthand and English. My present job is only a training station, so my coordinator has arranged for me to go to the Illinois Bell Telephone Co. where I will then try to become a better secretary in the future. I am very pleased with this because it has many fringe benefits for a woman, a pension program, promotion and profit-sharing. As you can see, the different courses and programs at Flower prepares a girl very well for a vocation.

I know that in my case, the work experience gained through office occupations has helped me to overcome my shyness in meeting new people and situations. Now I find I look forward to the future and better chances to become a secretary. When we discussed our opportunities with one another, we believed these vocational courses and work-study programs are necessary for our present training to fulfill our future objective.

I know I am better prepared and farther advanced at this particular time than I would have been if I had not taken a business major. Thank you.

Mr. **Pucinski.** Miss Barrett, do you live closer to Flower than you do to Jones?

Miss **Barrett.** Yes.

Mr. **Pucinski.** Is that why you are attending Flower. You say you want to be a secretary?

Miss **Barrett.** Yes.

Mr. **Pucinski.** Of course, you are a graduating senior, so you wouldn't want to transfer at this late date to a new school?

Miss **Barrett.** No.

Mr. **Pucinski.** But in the lower grades among the young ladies you know at Flower, do they intend to transfer to Jones, do you know offhand?

Miss **Barrett.** I really couldn't say.

Mr. **Pucinski.** Flower is a very old school, is it not?

Miss **Barrett.** Yes.

Mr. **Pucinski.** And it is kind of a little on the decrepit side, isn't it?

Miss **Barrett.** Yes.

Mr. **Pucinski.** Is any effort being made at Flower to try to transfer some of the girls from Flower to the Jones School to give them better opportunities?

Miss **Barrett.** I don't think so.

Mr. **Pucinski.** Not as yet?

Miss **Barrett.** No.

Mr. **Pucinski.** I underscore the "yet."

Dr. **Lehne.** They are getting a good education at Flower.

Mr. **Pucinski.** Well, if you had the opportunity and if this bill were enacted and the various provisions of this bill were available to the city of Chicago, what are some of the things that you would do at the Flower School. Suppose you became the principal of that school; what are the things that you would like to see done in that school to make it a more effective school for a young lady like yourself and all the other young ladies there?

Miss **Barrett.** First, I would stress that we have more activities than we do.

Mr. **Pucinski.** What kind of activities?

Miss **Barrett.** We have different clubs. I think that if the clubs could get together with the principal and discuss the problems then maybe they could take outside tours and things like this. Well, I don't know. I can't really say what I would do if I were principal.

Mr. **Pucinski.** That is the problem that a lot of the educators have, you see. For one thing, we have included in this bill some funds for some research and some demonstration programs because we know that in many of the vocational schools across the country they are not quite doing the job that we think they ought to be doing and they think they ought to be doing, but they are not sure what would work more effectively, so your very frank and honest statement merely supports the need for some experimentation in this field to make these schools more productive; so when a young lady like you graduates from a school like this, you have a better preparation to take on some new responsibilities and to that extent, we thank you for your testimony.

Mr. **Hawkins.** I didn't quite understand if you indicated whether or not you would choose Flower or the Jones Commercial School. Assuming that you were starting anew, and you had the choice of two schools, which one would you choose?

Miss **Barrett.** Before I went to Flower, we had counseling from Flower. I don't think there were any from Jones, and the reason I chose to go to Flower was because it was offering a trade, and, as a senior, you could get into any kind of O.O. or D.E. programs which would help you to graduate in June. That's why I chose Flower.

Mr. **Hawkins.** Do you believe Flower to be a better school than Jones? Why look out there?

Miss **Barrett.** I really couldn't say. I can say that Flower is a fine school, and Flower to me could be better than Jones.

Mr. **Hawkins.** Thank you very much.

Mr. **Pucinski.** One question. I wanted to check, Miss Barrett, what type of counseling service do you have at Flower? Do you begin to see a counselor very often, and do they discuss with you at any great length the various opportunities that are available to you after you leave the school?

Miss **Barrett.** Now at Flower they have—they are talking about college funds.

Mr. **Pucinski.** College what?

Miss **Barrett.** The student loans, if you want to call them that. I am saving my money to go on to college, and where I am now, you can stay there or else you could transfer to another place with the skills that you already have with the present training you are getting at Flower.

Mr. **Pucinski.** But do you feel that you are getting sufficient information to help you make your decisions and guide you along into a higher education if you wish? Are you getting enough counseling, and do the counselors at your school have sufficient understanding of all the programs that are available to you?

Miss **Barrett.** I think so, but the counseling I get is from my teachers. I very seldom have time to see the counselor unless I get permission from the class teacher to go to the counselor's office.

Mr. **Pucinski.** Do you know offhand, and perhaps you don't know this, but maybe you do. Do you know whether or not the United States Employment Service gets down to your school, and do they ever tell the youngsters about job opportunities. Do they hold any assemblies or have any exhibits or do anything that gives young people in your school a better understanding of the various job opportunities that are available when you leave school?

Miss **Barrett.** I think they are.

Mr. **Pucinski.** Among your girl friends in school, and perhaps from your own experience, do you young people feel like you know where you are going in the next year or two, or 3 or 4 years? Do you feel you have enough information and enough access to information so that you can lay out some kind of a course of action for yourself in the immediate future as far as your education. Or, if you don't plan to go on to higher education, where you are going to go to work? Is there any effort being made to orient young people in that direction so they have some idea of what is going to happen to them in the next couple of years?

Miss **Barrett**. Yes, I think in our junior year we are to decide whether we are to go to college or prepare ourselves for the work world, and also we have different programs about work experience or college if we want to go.

Mr. **Pucinski**. Among your friends and from the people you know of at school, do many of the young women drop out along the way, or do you find a good many of them are motivated to stay in school?

Miss **Barrett**. Many are motivated to stay in. The reason that many of them stay in, I would say, is because of cooperative work-study programs where they are earning money and working while they are going to school.

Mr. **Pucinski**. Now, these work-study programs, are you now in the work-study program?

Miss **Barrett**. Yes, I am in the office-occupations course.

Mr. **Pucinski**. And you get paid?

Miss **Barrett**. Yes.

Mr. **Pucinski**. Has this in any way helped you stay in school? Would you have remained in school, and could you have remained in school and would you feel the way you do about going on if you were not in the work-study program?

Miss **Barrett**. I will say this. I don't think I could stay in school if it wasn't for the cooperative work program. At certain times, like at home, there are financial problems where I think the cooperative work program is necessary.

Mr. **Pucinski**. I certainly appreciate your frankness here because in this bill we do have funds specifically earmarked for the work-study program. We feel strongly that this program has helped keep an awful lot of youngsters in school who might otherwise reach a dead end and drop out simply because they couldn't afford it, so your testimony is very helpful to us in evaluating this legislation.

Mr. **Hawkins**. As I understand, you are in the office occupations work-study program. Now, are you preparing for a business career, or are you preparing for college?

Miss **Barrett**. I am preparing for a business career. Now I have learned to use the stenocord, the 10-key and full-key machines and all the machines we have in school which are mostly what they have in offices today.

Mr. **Hawkins**. When you graduate from Flower, will you then be prepared to go into some employment, or is it your intention at that time to go on to college, and if so, what would you attempt to do in college?

Miss **Barrett**. My intentions are to go to college.

Mr. **Hawkins**. And to study what?

Miss **Barrett**. Take up shorthand and English.

Mr. **Hawkins**. Are you talking of business college?

Miss **Barrett**. Yes, I am going to Lutheran College for a business course.

Mr. **Hawkins**. Would you feel that when you go to Jones Commercial you could go into employment if you wanted to at the end of—Jones Commercial rather than, let's say, graduating from Flower and then having to go into another training educational situation rather than directly into employment?

Miss **Barrett**. Jones and Flower, aren't they about the same?

Mr. **Pucinski**. Well, Jones is a very modern, new school, and they could have—well, it just opened a couple weeks ago, and it has got about the most modern facilities in the country.

Mr. **Hawkins**. Well, are we telling you about Jones for the first time? I am trying to find out whether or not you have known about Jones.

Miss **Barrett**. Yes, I have.

Mr. **Hawkins**. And whether or not you have discussed with anyone the merit of one school as compared with another and whether or not you have received counseling along the way that might assist you to make a decision that would be in your behalf rather than, let's say, making decisions that you make yourself that may not always be based on the experience of others who know what the merits of a particular school may be and thereby assist you. In other words, have you been exposed to this type of assistance counseling and guidance and the knowledge——

Miss **Barrett**. I have had this from Flower.

Mr. **Hawkins**. You have?

Miss **Barrett**. Yes.

Mr. **Hawkins**. You said you got this from your teachers and not from the counselor; is that true?

Miss **Barrett**. The only counseling that I have had at Flower was when the seventh and eighth grade orientation day came.

Mr. **Hawkins**. Well, one of the provisions under Mr. Pucinski's bill is to strengthen the counseling service, and I would strongly suggest certainly this point of the bill has been well justified, I think, in the testimony today. I certainly wish you the best of luck in your study. Apparently Flower is a good school, and certainly we hope you will always be proud of it.

Mr. **Pucinski**. Thank you very much. We are grateful to you for your frank answers to our questions, and it does help us better appreciate the need for some of these provisions. I am very grateful to you. Thank you very much, and a lot of luck to you.

STATEMENT OF KENNETH DAVIS, STUDENT, PROSSER VOCATIONAL HIGH SCHOOL, CHICAGO

Mr. **Davis**. Good afternoon. I am Kenneth Davis, 1715 North Sawyer Avenue, Chicago, Ill. I am from Prosser Vocational High School. I am majoring in electronics there, and all our shops are well equipped; but this is probably one of our best. We have just received all new kinds of equipment there. We had new equipment when we opened in about 1960, and we had the shop reoutfitted about a year ago, and we take a basic RCA course, and it is similar to the one they offer at Bryant, the electronics college. This school, as far as counseling—you have been talking about counseling. Our counseling department is very good. We all—or, in fact, most of us are called down from time to time just to give a progress report on how we are doing in our schooling at the time. We are getting the new courses that Dr. Lehne mentioned next year. We are going to start with biology and some language in the curriculum for next year. I think one of the interesting things about Prosser is something that has come about in the last 2 years or so, and that is the program that we have whereby in our junior and senior year, anybody in any of our shops can go out and get a well-paying job in that field. We have excellent job placement for everybody who graduates from Prosser. Now, even though we have this, there seems to be a trend now, I think—we have 10 or 15 people in this graduating class, and I am one of them, who have strayed slightly away from the vocational and are going on to teaching in that vocation. At least five or six of us have been accepted into Illinois Teachers College North, and we'll go on in our fields there and come back into vocational education sometime in the future. It will probably be in electronics.

Mr. **Pucinski**. This is interesting because one of the things we provide for in this bill is some funds for training teachers for vocational education. One of the problems that we have had in attracting and developing teachers has been in the vocational educational field, and it is rather interesting to hear you say you have become sufficiently interested in the whole principle of vocational education that you now want to become a vocational education teacher. Do you think that you probably will want to get some practical experience along this line?

Mr. **Davis**. Yes. This is one of the things. I know all of our teachers almost without exception in our vocational areas have come to teaching from industry in their field, and we are being encouraged to take some kind of practical work in that field. This whole program was started 2 years ago when they first founded the Future Teachers of America Club at Prosser which was considered unique at a vocational school. It went over big, and it has been from there—well, now I am talking for myself because I happen to be one of those people interested in that field; but as far as the others go, the job placement and all that interest in vocational education is very good there.

Mr. **Hawkins**. I have nothing.

Mr. **Pucinski**. Well, thank you very much. We are very interested in what you have told us about your experiences over there. Our next witness.

STATEMENT OF DORIS HOFFMAN, STUDENT, RICHARDS VOCATIONAL HIGH SCHOOL, CHICAGO

Miss **Hoffman**. Good afternoon. My name is Doris Hoffman, 3604 South Wood Street, Chicago, Ill., and I represent Richards Vocational High School.

Our democratic society today depends on the ability of its citizens to develop occupational proficiencies. Education and training for occupational proficiencies should be an integral and necessary feature in the educational program of every young person today.

Richards is providing girls with experience which will enable them to secure, develop, and use their special skills and abilities that they will need in entering their chosen vocation. The vocation I have selected is cosmetology. Cosmetology is the art and science of caring for hair, skin, and nails. I have chosen this vocation because of the advantages and rewards which cosmetology offers.

Although I have always been interested in this field, it was in my sophomore year that these advantages and rewards were brought to my attention by the faculty of Richards. Some of the advantages are high earnings, a stable occupation, during marriage the opportunity of part-time employment to supplement the family income. The training that I am receiving in cosmetology are in the areas of shampooing, scalp treatments, hair cutting, permanent waving, manicuring, hair coloring, and facial work which will enable me to successfully fulfill the requirements to take my State board exam next year. I must complete 1,500 hours in an accredited beauty school before I can take this examination.

In addition to fulfilling this requirement, I will have at the same time completed my necessary courses to earn my high school diploma. This will enable me to practice in the State of Illinois the skills I have learned at Richards.

This, however, is only the first step on the road to my eventual goal which is to become a cosmetology teacher in the Chicago public schools.

In order to become a cosmetology teacher, I must be 21 years of age. I will need an additional $500 for teacher training in cosmetology, 5 years' experience as a beautician, and 2 years of college. I plan to earn the funds for financing my college education by working part time in a beauty salon while I am attending school. Besides applying the funds for my college education, this work experience will partially fulfill the requirements of operating 5 years as a licensed beautician.

Richards is providing a means for economic self-sufficiency. This self-sufficiency will finance my college education, provide the necessary work experience, and provide a means of support during the period I will be attending school. It is only due to the vocational training I am receiving at Richards that I will be able to attain my goal.

Mr. PUCINSKI. Are you speaking of the work-study programs or the Neighborhood Youth Corps?

Miss HOFFMAN. The self-sufficiency I speak of, well, that is included in it.

Mr. PUCINSKI. Do you work? Do you have a part-time job?

Miss HOFFMAN. Yes.

Mr. PUCINSKI. While you are attending school?

Miss HOFFMAN. Yes.

Mr. PUCINSKI. And you go to school in the morning and then to work in the afternoon?

Miss HOFFMAN. Yes, sir.

Mr. PUCINSKI. What kind of work do you do in the afternoon?

Miss HOFFMAN. I am working in a beauty salon.

Mr. PUCINSKI. Now, you talked about ultimately becoming a cosmetology teacher.

Miss HOFFMAN. Yes.

Mr. PUCINSKI. And you seemed to know all the things that you will need. Where did you get the motivation to pursue this?

Miss HOFFMAN. By the faculty of Richards, especially by my teachers in cosmetology.

Mr. PUCINSKI. Is it the teachers or counseling or a combination of both?

Miss HOFFMAN. It is really a combination of both.

Mr. PUCINSKI. The teachers at Richards, are they set up to date on all the latest techniques and the newest methods?

Miss HOFFMAN. Yes, sir.

Mr. PUCINSKI. Do you know how they acquire these techniques?

Miss HOFFMAN. The different manufacturers sponsor beauty shows, and there are stylists and other people present at these shows, and they demonstrate the newest techniques. We were invited and we are allowed to go to these demonstrations.

Mr. PUCINSKI. Very good.

Mr. HAWKINS. I think you said you were advised by your teacher or counseled by your teachers to become a teacher or a practitioner in cosmetology, which?

Miss HOFFMAN. I was influenced by my teachers.

Mr. HAWKINS. By them?

Miss HOFFMAN. Yes, sir.

Mr. HAWKINS. You mean by what they said or the way they acted or by the precept, by the image they created?

Miss HOFFMAN. Not really the image. It's just that they are helping so much, and I want to help, too.

Mr. HAWKINS. If they influenced you to become a teacher, they must have had a great deal of influence.

Miss HOFFMAN. Yes, sir.

Mr. HAWKINS. Thank you.

Mr. PUCINSKI. Would you be able to continue this entire pursuit if you were not working?

Miss HOFFMAN. No, sir, I would not.

Mr. PUCINSKI. Of course, you then feel that this supplemental assistance that you get as a student makes it possible for you to continue and graduate from high school and go into higher pursuits?

Miss HOFFMAN. Yes, sir. Well, the economic self-sufficiency that I spoke of will finance my college education because I will be able to work as a beautician while I am going to school.

Mr. PUCINSKI. One of the strong points of this legislation we are studying is to provide and even expand work-study programs so that youngsters such as yourself can continue their high school education and at the same time get some financial assistance where otherwise if you didn't have it you would have to drop out. We are trying to arrest the dropout rate, and it is refreshing to meet someone who is a part of the program and doing so well in it, and I want to thank you for your testimony.

Miss HOFFMAN. Thank you.

STATEMENT OF JAMES A. SIMPSON, STUDENT, CREGIER VOCATIONAL HIGH SCHOOL, CHICAGO

Mr. SIMPSON. Good afternoon. My name is James A. Simpson, and I live at 3331 West Flourney Street, Chicago, and I go to Cregier Vocational High School. I attend this vocational school because during my time in grammar school which was Upper Grade Center, we had counseling and we were told about this school, that is, a vocational school; and those who weren't planning on going to college, that it would be fairly good for them to try to take up a trade so they could go out and get a better job. I feel that Cregier is a very good school, and we don't have any racial problems around, no gang fights and so on. I feel that with all of us working together, we help each other. All the students around there try to get along with everyone and they try to help everyone out that doesn't know anything—we try to help them as much as possible because we feel that now today we can't make it unless we help each other. I feel that we, the youth of today, will be the homemakers and parents of tomorrow. Our school is a very old school, and I have been told along with the whole class that we will be getting new equipment in, so I am happy to say and also sad to say that I won't have an opportunity to use the new equipment because in June, that will be the end of my going to school. I am happy to say that I will be graduating instead of dropping out; and I am sad to say this because the school I am leaving is a very good school. I was inspired by it because my brother Iry went there. He graduated and got a successful job. He had taken up electric shop, and he is working at Modern Electric. I also work after school and I work at Terrific Gasket Co., and I do work such as making patterns for rule dies for punch presses.

Mr. PUCINSKI. Could you have stayed in school and finished if you weren't working after school? Now you said a moment ago that you are happy you are going to graduate instead of being a dropout, and I am happy too and I am sure your parents are happy and I really think the whole community is happy; but could you have remained in school if you weren't part of the work-study program of going to school and working at the same time?

Mr. SIMPSON. Yes, I could.

Mr. PUCINSKI. You could have. Do you feel that the additional assistance that you are getting does give you some encouragement to go on?

Mr. SIMPSON. I do.

Mr. PUCINSKI. Do you plan to go on to college?

Mr. SIMPSON. Yes. Before I went to high school, I had not planned to go on to college. But now I think I will, and I have made out an application for Loop Junior College.

Mr. PUCINSKI. Let me ask you, if you can tell me this, and I don't know if you can, but what percentage of your friends intend to go to work after they graduate, or do they intend to go on to college as you do?

Mr. SIMPSON. Well, most of them intend to go to work because they feel that they will get in college and be inspired by the weather, by the cars and girls. They feel that they wouldn't be able to hold out in college, so they feel they are going to get a job.

Mr. PUCINSKI. Most of the people you know in school, will they be prepared to get a reasonably decent job when they leave the vocational school you are attending?

Mr. SIMPSON. Well, those that I work with, I think they will, because I am one of the underclassmen, and in my shop I am the foreman in the shop, and when they come to me for assistance I try to help them as much as possible. If I don't know, I go to my instructor; and if he feels that it is something that the whole class should know then he will call the class to attention at that particular time.

Mr. PUCINSKI. Well, thank you for your contribution here today, and we certainly have a better understanding of what some of the problems are and what some of the strong points are. We are happy to see your expertise vocational school has motivated you to stay on and think of going on even higher, which I think is good for all of us.

STATEMENT OF FRANK ROMER, STUDENT, LANE TECHNICAL HIGH SCHOOL, CHICAGO

Mr. **Romer.** Good afternoon, Congressman Pucinski and Mr. Hawkins. I am Frank Romer. I live at 5450 North Ludlam Avenue, Chicago, and I represent Lane Technical High School. I am sorry I haven't got a prepared speech to give you this afternoon, but I was just told I would be asked questions.

Some of the courses at Lane that make it a technical school are the different kinds of shops, a machine shop, print shop, et cetera. They have various types of drafting, minor and advanced, mechanical drafting, and they have an extensive college preparatory system there. I myself took a college preparatory course when I entered high school. I had planned on going to college, and I still do, but on a nighttime basis because I have to go to work.

I am now taking advanced drafting and highly advanced math.

Mr. **Pucinski.** Have your counselors had an opportunity at school to tell you what job opportunities will be available to you after you leave Lane Technical?

Mr. **Romer.** Yes, sir, they have. We have a Neighborhood Youth Corps at Lane.

Mr. **Pucinski.** What year are you in?

Mr. **Romer.** I will graduate in June.

Mr. **Pucinski.** Has the United States Employment Service been in to give you fellows some ideas of where the job opportunities are and the job shortages are and who is looking for draftsmen of your caliber?

Mr. **Romer.** I don't know if the State has been in. I know they gave the mental aptitude test this past week, but different companies I know called in to the principal, and he has gotten in touch with the teachers, and there are quite a few companies looking for draftsmen from Lane. I have a job drafting, or I will have, when I graduate, at a company which I got through school.

Mr. **Pucinski.** Well, Lane Technical High School is one of the show places in America. The State Department sends foreign visitors to see what we are doing in vocational education there, so you are lucky to be in that school. Would you express your judgment as to how many young fellows that you know—I know you wouldn't have the statistics, but just the friends that you have at school, how many of those fellows drop out, or does the majority of those young men go on and graduate from that school?

Mr. **Romer.** From what I understand, the majority that enter Lane in the freshman year graduate in the fourth year. I have known only one or two personally in the 4 years of my schooling that have dropped out or were transferred to different schools.

Mr. **Pucinski.** You have students at Lane from all over the city?

Mr. **Romer.** Yes, we do.

Mr. **Pucinski.** I mean, it is an open school, and any youngster who qualifies can enroll providing there is a vacancy in the school, right?

Mr. **Romer.** Yes, sir.

Mr. **Pucinski**. Very good. Would you say that the fact that you are attending a vocational school, your school has actually helped slow down the dropout rate when we consider the number of youngsters who drop out?

Mr. **Romer**. Well, this is really hard to say. I mean, I have had too much to do to even think about dropping out, and I think this is the way it is with all the fellows at Lane.

Mr. **Pucinski**. When you finish high school, do you feel you will be prepared to take on a reasonably decent job?

Mr. **Romer**. Yes, sir.

Mr. **Pucinski**. You wouldn't have had that opportunity if you had not gone to a vocational high school, I take it?

Mr. **Romer**. I don't think I would get the job I am going to get now if I had not gone.

Mr. **Hawkins**. I have always heard Lane Technical is a good school. What would you attribute this to, its teachers, equipment, methods, or just why is Lane Technical considered by all of us across the country as being such an excellent school?

Mr. **Romer**. Well, first I would like to thank you for your compliment. I really think it is just the over-all attitude of the students and teachers and the relationship between the students and teachers that make Lane what it is. We have a good counseling staff at Lane, and we have at least three counselors for each year group plus we have a college adviser who just takes care of the colleges for the seniors; and if you have any questions about colleges or anything at Lane, you can get in touch with this one counselor; and throughout the 4 years of high school, most of us have been called on at least twice just for counseling to find out how we are doing, where we need help, so I think it is just the relationship between the student and teacher that makes Lane what it is.

Mr. **Hawkins**. You said the majority of the students who entered at the time you did will graduate. You don't mean that almost the majority will drop out, do you? By using the word "majority," you meant a little bit more than 51 percent, didn't you?

Mr. **Romer**. Well, you are putting me on the spot now. Most who entered will graduate.

Mr. **Hawkins**. In other words, very few will not graduate?

Mr. **Romer**. That's right.

Mr. **Hawkins**. All right. I'm sure that must be the situation. Thank you very much.

Mr. **Pucinski**. Thank you very much.

STATEMENT OF CLAUDE JORDAN, STUDENT, SIMEON VOCATIONAL HIGH SCHOOL, CHICAGO

Mr. **Jordan**. Good afternoon. My name is Claude Jordan, and I live at 3410 West Douglas Boulevard, Chicago, Ill. My school is Simeon Vocational High School.

The name Simeon to us is only 2 years old because the other name that we used to have was Westcott, and Westcott Vocational High School is located at 80th and Normal. As you enter Simeon Vocational for the first 2 years, you will take exploratory shops that will give you an idea of which one you would like to have as you become a junior. When you are a junior, you take vocational concentration which is your major. I am taking electric shop and the girls, of course, are taking business, typing, shorthand. The fellows have auto mechanics, also. We really have a good amount of shops for the boys and girls.

Mr. **Pucinski**. The gentleman before you said that at Lane Technical they had three counsellors for each class, for each grade, I presume he meant. Do you know offhand how many counselors you have in your school.

Mr. **Jordan**. You mean in school?

Mr. **Pucinski**. Yes.

Mr. **Jordan**. About four.

Mr. **Pucinski**. Do you have easy access to your counselor?

Mr. **Jordan**. Yes.

Mr. **Pucinski**. Do the counsellors give you a pretty good idea of what is in store for you when you graduate or what courses you may take in school to get into places where there are good job opportunities?

Mr. **Jordan**. Yes; we have what you call—it's not exactly a personal counselor, but it is a counselor who is familiar with you. He sits down and you talk your problems over with him. He knows exactly what you can do and your ability.

Mr. **Pucinski**. Well, I certainly want to thank you. I just had one question, one final question. If you were the principal of this high school and we have what is provided in this legislation that brings other things up, what would you think you would want to improve most urgently?

Mr. **Jordan**. More shops.

Mr. **Pucinski**. More shops?

Mr. **Jordan**. Yes, sir.

Mr. **Pucinski**. What kind of shops?

Mr. **Jordan**. The shop we have like aviation and well, let's see. We have an electric shop that is not fully equipped for electronics. We need a good electronic shop and several others. I can't think of them offhand, but I would get more shops.

Mr. **Pucinski**. All right. Thank you very much, Mr. Jordan. We are grateful to you for your testimony, and we are grateful to all the young people who participated in this afternoon's panel. I think several things have become very clear to me. One is the cruel treatment that vocational education has been getting in terms of people thinking that vocational education is a dead end for higher educational pursuits, and here we had a panel of youngsters who very much refute that concept. Now, let's assume that the panel may not have been a complete cross section. I am mindful of the fact that for testimony like this, well, school teachers usually tend to select the brightest and best students; but even at that, it is interesting to note that most of the youngsters indicated a strong desire to go on to higher education. So it appears to me that the course that we are taking in this legislation to give youngsters a good preparatory course in a vocational school whets their appetite for higher educational pursuits and this is contrary to some of the old beliefs in the community. I think that parents who have traditionally opposed or objected to vocational education ought to be mindful of the fact that there is a distinct advantage for a youngster to be enrolled in a vocational school; because from the testimony this afternoon, many of these youngsters might have dropped out or shown on particular interest in going on to higher educational pursuits had they not been enrolled in such courses. I am particularly impressed with the young man who testified about the improvement in his grades from C to A simply because of the more exciting environment he was placed in when he attended the Westinghouse Vocational High School. I am grateful to you, Mr. Koerner, for bringing this group before us, and I think their testimony is certainly going to help us tighten up the legislation and make sure that this legislation meets the mark that we want it to meet. I am grateful to you.

Our next witness as I said is John Desmond, president of the Chicago Teachers' Union. Mr. Desmond, this statement will go in the record in its entirety just the way it is now. Do you wish because of your other commitments, to summarize it and give us the highlights, or if you wish you can read it, whichever way you wish.

STATEMENT OF JOHN E. DESMOND, PRESIDENT, CHICAGO TEACHERS' UNION

On behalf of Chicago Teachers' Union, may I thank you for the opportunity to appear and present testimony on the Vocational Education Improvement Act of 1967 before the General Education Subcommittee of the House Committee on Education and Labor on Friday, April 28, 1967.

I should like also to thank this committee for its past efforts on behalf of vocational education and to commend the committee for its proposed amendments to the Vocational Education Act of 1963 as embodied in the Vocational Education Improvement Act of 1967.

Specialists concerned with vocational education in Chicago and I have given careful thought to the provisions incorporated in H.R. 8525. We urge consideration of the following recommendations of the union's practical arts and vocational education committee, Glendis Hambrick, chairman:

The March issue of *School Management* carries a significant article titled "Vocational Education—A Time to Shift Gears." According to this, "To say that things are fast changing in vocational education is not quite true. The pressure for change is enormous. Change is in the air * * * But this is basically a revolution in the making. It has not arrived yet. When it does, though, the lightning speed and intensity of change will more than atone for its slow start * * *"

"U.S. Steel Corp.'s capital spending program is lagging far behind schedule because of lack of skilled employees.

"Boeing and Douglas aircraft companies have been forced to delay jet deliveries because suppliers cannot find enough trained manpower to turn out engines on time.

"Job openings for 2,050 electricians, machinists will have opened up by this June in Bridgeport, Conn., according to the Wall Street Journal. But most of the openings will still be open after June has come and gone because only 287 men in the area will have completed the necessary training."

So it goes across the Nation—the shortage of skilled craftsmen is affecting the Nation's industries. "The Labor Department, according to the Wall Street Journal, estimates that by 1975, 4 million workers with new skills will be needed; only 255,000 are being trained right now. Yet, ironically, men are losing their jobs daily because their skills are obsolete * * *

"That is why the coming revolution is, as former U.S. Commissioner of Education Francis Keppel states, 'a necessary revolution'."

This will be brought about by many factors such as the changing job market; the fact that students must be prepared to adapt readily to two or three occupational changes in their lifetime; population mobility—with a current student moving up to as many as six or more times before finally settling down raises the question whether he will be able to utilize the occupational training received in one part of the country in another; new job emphases; new training patterns; and a host of others.

"Recent Federal legislation makes funds available to school districts for vocational education with the stipulation that the money be used to improve present programs and develop new ones."

CHANGE NEEDED IN VOCATIONAL EDUCATION IN CHICAGO

In 1917, when the Smith-Hughes Act was passed, it held as much, or more, promise as the Elementary and Secondary School Act of today. In general, the Smith-Hughes law provided funds for modern training for youth in vocational education, home economics, and agriculture. After 50 years, however, vocational education does not appear to have improved much. The practical arts and vocational education committee of Chicago Teachers' Union is of the opinion that vocational education in Chicago, especially during the last decade, has been sorely neglected; that Chicago vocational school—have deteriorated; and that their programs and products have regressed. Why?

The union's PAVE committee is of the opinion that much of the blame for deterioration and regression of vocational education in Chicago can be charged to (1) the detachment of vocational education from industry; (2) the administration control of such schools, and (3) the kind and amount of counseling service being made available to students.

The vocational education programs in Chicago are administered by and large, by such academicians who have had little or no interest in or knowledge of industrial processes until they were appointed to administrative posts having to do with vocational education. After a few weeks of intensive reading on the subject, research, and industrial visitations, the administrator becomes an "expert" on vocational education and subsequently is foisted off on the general public as an authority with expertise in vocational education. He writes articles, attends meetings, and reports glibly on trends from studies and statistics.

In practically every instance, however, these vocational administrators have never served an industrial apprenticeship, have never had on a pair of overalls, and probably do not know a micrometer from a ball peen hammer. Yet they seek to dictate what and how much should be taught and by whom.

Chicago's administrative organization contributes directly to the utter chaos now existing in the shop training areas. The cumbersome title of Department of "Practical Arts and Vocational Education" is in itself an indication of confused, fuzzy thinking. This department administers general high school shop and drafting; elementary and upper grade center shops; technical high school shop and drafting; vocational high school shop and drafting; Washburne Trade School; all home economics classes; and all business education classes.

Moreover, Chicago's Practical Arts and Vocational Education Department combines all shop and drafting departments under one administrative assistant superintendent. Supervisors or directors in this department qualify by having (1) at least a master's degree and (2) prior to appointment, 5 years of successful teaching in his or her subject, but may not necessarily have to have trade or industrial experience. Industrial or skilled craft employment experience seems to be of least importance.

So far as the individual vocational school principals are concerned, no industrial or craft experience seems to be required. There is no tangible evidence that principals appointed to vocational education schools need have any understanding of or sympathy for the vocational program.

Certification standards for qualifying shop teachers lean heavily on prohibitively high academic factors. The pivotal ingredient is college or university academic training. Skilled craftsmanship, experience, and competence based on industrial standards appear to be almost secondary considerations. In fact, for the general, technical, or upper grade center shop and drafting teacher, industrial experience or competency are not required at all—only the baccalaureate degree.

The colleges and universities are not supplying enough degree-holding shop teachers—practically none. The skilled industrial craftsman is offered less than journeyman wages, and this only if he can also show up to 30 semester hours of college academic credit. He is then restricted to trade or vocational school shops. Further, the craftsman from industry cannot hope to move upon the salary lane until he earns a master's academic degree from a recognized university. He begins at year one, lane one, on the salary scale. His apprentice years and journeyman craftsman years subsequent to apprenticeship are completely ignored by our academicians-administrators who write the statements on qualifications.

The results of the foregoing policies are: More than one hundred (100 plus) shop teacher vacancies in Chicago. Many school shop and drafting classes are completely closed for lack of teachers. Some suggested solutions are:

(1) Modify existing shop and drafting teacher requirements so that more industrially competent craftsmen can be brought into the schools as teachers.

(2) Pay the teacher-craftsman from industry at least the negotiated craft union or industrial union scale.

(3) Recognize industrial journeyman experience in salary lane placement and advancement.

(4) Seek to amend the Illinois school code, where necessary, to permit the employment of such craftsmen from industry in all school shops and drafting rooms.

The board of education should admit the fact that earning a master's or doctorate in education or administration and passing a principal's examination does not endow the individual with any special knowledge or abilities in industrial areas.

The administrative heads of industrial companies or corporations usually come from the ranks, as it were. They certainly always know, intimately, the operation of the organization or similar organizations from personal experience or employment in such an organization. Personal experience and/or successful employment prior to promotion to titular administrative officer is the key to opening the door of a successful administration.

This does not obtain in Chicago's trade and/or vocational schools. Principals are assigned who came from elementary schools and some have less than 1 year of experience as a principal.

Previous industrial experience is an impossibility for these assignees because they have been in pursuit of academic competence as students, teachers, assistant principals, coordinators, or counselors.

Criminal negligence may even be charged in the operation of Chicago's secondary school systems. I know this is shocking, but I must use the term "criminal negligence" because the board of education and the Administration know full well that only one out of six of Chicago's high school children will go to college; and, probably, no more than 13 in 100 will earn a degree. Nevertheless, in general, all existing high school curriculums are based on the college entrance requirements fostered by the North Central Association (with the exception of the nine vocational high schools).

Our professional educators know that 4 out of 10 fifth graders will never finish high school. Only 43 percent of our adult populations have completed high school. Only 8 percent completed college. Sixteen percent of these young people now in college are expected to finish and earn the baccalaureate degree. One-half of 1 percent earn the Ph. D. degree.

We are therewith preparing 17 percent of the high school student population and throwing 83 percent to the street corners and four winds. Then, hypocritically, when these deprived young people riot, loot, and create civil disorders, we ask why. Look back at how well we have prepared them to live, to earn, and to be productive, yes, and to be proud; and then go and ask yourself why.

Each year in Chicago for the last 50 years or more, high schools in ghetto areas have graduated thousands of young people from college preparatory programs. Economically, these youngsters have no hope of higher education. Educationally or economically, they are totally unprepared.

On the drawing boards now are new general high schools which must, under present projected plans, be proponents of the college preparatory, liberal arts curriculum. Two of these schools, the new Forrestville and the one to relieve Waller and Cooley on the West Side are in the midst of culturally deprived, lower-income, ghetto areas. The people in these areas need college preparatory training about as much as they need another 17 story high-rise ghetto.

This is building-in failure and we charge this as being criminal intent and intellectually dishonest.

If our schools were operated at the secondary level really to serve the masses—the greatest good for the greatest number—all secondary programs would be vocational-technical. The few exceptions would be the general high school offering a liberal arts college preparatory curriculum—the direct opposite of Chicago's existing secondary school lineup.

This would be intellectual honesty—facing things the way they are. Our schools would then be preparing our population for the world of today and tomorrow. The practicality of correlating education and/or learning with after-school living and earning is undebatable. Surely there can be no disagreement on this point; yet there exists a vast difference between this thoery and classic American educational practices. Why?

When we ask why, we must remember that all of American education is administered by some of that 8 percent who hold college degrees, and more specifically by that one-half percent who hold doctoral degrees.

Competent instructors, supervisors, and administrators are essential; but they must be qualified technically as well as professionally. [Reads:]

> Money invested in appropriate and effective occupational education returns high dividends. When the people are made employable through education, unemployment and relief payments are avoided. The employed person starts paying taxes. An adequate supply of trained personnel and adequate facilities for providing the training, attract new industries to a community and help industries already there to expand and adapt to changing conditions * * * (*School Management*, March 1967, p. 156).

Our contention is that, whatever the reasons, it is past time for a change.

Well, because my time is limited, Congressman, on behalf of the Chicago Teachers' Union, I want to thank you again for the opportunity to be here, to talk on the Vocational Education Act, and to give you some of the ideas of what the committees in our organization are doing. The paper I presented to you has been made up of the committee's activities in the educational field over the years. Some of the comments may be critical. I hope, however, that you will look at them as constructive criticism and not as personal criticism. These people are in the field of vocational education. The things they say are the things which they think are wrong with vocational education, and they express themselves frankly. Some of the things in my presentation perhaps do not pertain to your House bill here; but, all in all, they are trying to bring to the forefront what they have been working on over the years and are trying to highlight the fact that the vocational education has been a stepchild of the educational system for years, and that they are desirous of training individuals to take their places in our society, to be better citizens, and to earn livings to raise their families. Then jobs and positions must be found for these individuals, and only by doing a thorough training job in the elementary and high schools can we expect to attain the things we are seeking. As far as House Resolution 8525, I am very much in favor of increasing the amount of money for which you are asking. We probably could double the $400 million and still not have enough money to do the job which we would like to do both in Chicago and throughout the country.

We congratulate you for taking a new look at vocational education and do hope that you are successful in having the moneys allocated to this area. It is proposed that $100 million be allocated for construction of residential schools. We do need schools of this type in Chicago; there is no question about this. The courses to be included in these schools and the individuals who are to teach in these schools are some of the criteria that will have to be looked at with an open mind so that the individuals who will attend these schools will get the right type of training.

I hope these schools are not going to be used merely for buildings housing individuals without providing the proper programs and tools to carry out the training the residents should receive. We now have three vocational and/or trade schools in Chicago. The shops in at least one of them, that I know are small. If the buildings were expanded tremendously, and the equipment modernized and made more adequate, I think such schools could do a better job than they are doing at the present time.

The fellowship program we criticize in the bill, because we do not see enough money going into the teacher area. We wonder if this program has been written by someone high in the educational ranks. It appears that most of the fellowships are going to people in the colleges and to administrators. These are not the people training the children. We suggest the ratio should be 20 to 1 instead of what you have in the bill. I think that the more training and the more fellowships you give in this line are going to react to the benefit of everyone in the field of education.

So far as the administration of the law, we think it should be made so that it is flexible. We believe that allocating moneys on strict regulations is not something that can be carried out to the best ability of the administrators who are more or less given this function. We say that from community to community things differ. I think the training programs perhaps differ because of the availability of the positions in the community. Again I stress that there should be flexibility in the bill, itself, with regard to the allocations of money and what specifically it is going to do. I see no provision for modern machinery unless I've overlooked this. But here is an area where much money needs to be expended. Many of our vocational shops in the city of Chicago, are operating with machinery which is outmoded. We do not have sufficient funds to obtain modernized machinery for training students to go out in the world. In learning aspects of a trade, pupils use machinery and equipment that is outmoded. They are lost when they obtain a job. The machinery now being used in industry costs quite a number of dollars, and our school boards cannot afford to expend this kind of money on vocational education, unless the money is obtained from the Federal Government. So, here again, I think is an area which should be examined very seriously.

We look at the 15 to 21 age category as the potential dropout age group. We would hope, however, that an attempt would be made to start vocational education in the lower-age groups, perhaps from the seventh and eighth grade up. You heard some of our students talking about the Upper Grade Centers which we have here in Chicago. I think there should be an expansion of vocational education in this area. In my opinion sometimes we start too late in the training of students. We would suggest you look at it in this way and that money be allocated for the lower-age groups so these individuals can continue with vocational education on up through high school. This is a means of preventing dropouts.

We hope the moneys that you put in your bill are going to do a lot of good. It will, if it is kept within the vocational schools. We have looked at the Job Corps situation. We have seen the cause of this. We just read recently about Congresswoman Green's criticism of the Job Corps with regard to the cost of educating a person. The cost is $13,000 a year. We say we can do this better and cheaper. It will not run anywhere near that. We probably could educate quite a number of individuals for $13,000. I hope that this matter will also be looked into.

But all in all, when 4 out of 10 fifth graders will never finish high school; only 43 percent of our adult population have completed high school; only 8 percent have completed college; 16 percent that are now in college will earn a degree; and only one-half of 1 percent will earn a doctor's degree; we are preparing only 17 percent of the high school student population, and 83 percent are left to the street corners. We must prepare the 83 percent to live, to earn, and to be productive members of society.

Thank you, Congressman, for letting me appear before you. It's been a pleasure to appear.

Mr. PUCINSKI. I want to comment on the fact that I am happy to hear you say section 6 does not provide enough funds for teaching vocational educational teachers, and certainly, I think you have a valid point. Dr. Redmond made that point earlier today. Perhaps we may want to change the formula. Perhaps we want to put greater emphasis on fellowships for teachers and less emphasis on fellowships for administrators.

As far as the general idea, as you know the Office of Education is proposing that we take this whole title and move it over into title V of the Higher Education Act which would put this whole training program of vocational education into one big pool of training teachers. I am very much opposed to this concept because I know what will happen. Your vocational education teacher is going to get lost in the shuffle. It's interesting to see the way these hearings have developed. We have heard such sound testimony that we just have to start thinking of vocational education as an integral part of the preparation of young people to become productive in the stream of commerce when they graduate from school.

I like your suggestion about starting vocational training earlier. Perhaps it's extremely important for us to look and see whether or not we can't set up skill centers where youngsters perhaps as early as the seventh grade are going to be able to participate in vocational training or at least get some basic orientation to it. You are correct. Some of the students here have testified they probably could have used this earlier training, and I think that many of the youngsters would have been better prepared when they leave had they had this background training. I am grateful to you for your forthright statement, and I think you have shown us some errors in the bill that can be improved, but I hasten to tell you we are going to have a pretty difficult time even selling this package to the Bureau of Budget. We may have to find some place to make economies to transfer money here.

One area that you testified to and which I think we will look closely to is the Job Corps. I think that there is a great deal of merit to what you say that we might be able to do a much more effective job with youngsters in improving these programs here in the vocational educational field, than we do in the Job Corps. So that this is something I am sure my committee will want to look at. It's refreshing to see someone like you come before the committee and say cut this out and improve this situation. Usually people say just keep adding and adding and adding. I think you have given us some strong points here today.

Mr. **Hawkins**. I would like to commend you on a very forthright statement. I understand that among the recommendations that you have made are two: One, that at the secretarial level vocational technical education be emphasized; and secondly that teachers be qualified technically rather than by academic degrees, and more emphasis be placed on technical qualifications and less on whether or not they possess degrees.

Mr. **Desmond**. That is true, Congressman. We believe that in any subject area one should have the background of the practical work that he is in, and I think this is going to make him a better teacher, especially so in vocational education. I don't think that anyone can come in and teach a trade or shop unless he has some past experience and probably carries a union card in that area. I might add that in that area such person could be a much better teacher.

Mr. **Hawkins**. Are you expressing the views of the Chicago Teachers' Union?

Mr. **Desmond**. We are expressing the views of the Chicago Teachers' Union, and this is our committee who has made that report. This report has not been publicized yet. It will be forthcoming.

Mr. **Hawkins**. Does that union consist of members who are academic teachers on the academic side of education as well as the vocational education side?

Mr. **Desmond**. At the present time, yes.

Mr. **Hawkins**. They concurred in this view?

Mr. **Desmond**. That's right. We are going to get a good report. In the report, which I read, you will note that there is a shortage of vocational trade teachers coming into our system. I think we have 100 vacancies at the present time, and it's a question of where they would appear on our salary schedule, because of the academic training and the way our schedule is set up. At the present time, our vocational teachers are not getting the salaries they should because they lack the necessary educational qualifications for replacement.

Mr. **Hawkins**. Thank you.

Mr. **Pucinski**. Your statement, Mr. Desmond, on page 4, indicates that the results of the foregoing policies are more than 100 shop teacher vacancies in Chicago, and perhaps even the more important statement is that many schools' shops and drafting classes are completely closed due to lack of teachers. Now, this would indicate to me that this teacher shortage in vocational education is a very serious one.

Mr. **Desmond**. It is very serious, and it's going to continue to be more serious.

Mr. **Pucinski**. And I think that perhaps we may want to give some very serious consideration to providing some sort of incentive plan in this legislation to those school systems that do go out and put on a recruiting program, and bring into the system the people that you have described on page 4. There will probably be some objection. I am sure there will be from the universities, because you are actually suggesting lowering the academic requirements to get practical experience for vocational-educational teachers in the system, but I would say to those who would be quick to criticize your suggestion that there has been testimony before the committee that they are bringing into the vocational school system the basic subjects. They are bringing in foreign languages, biology, various other classes, and it would seem to me those classes will continue to be taught by teachers with the normal academic requirements.

But in the case of vocational education, unless we give serious consideration to such a program, this shortage is going to increase substantially, when by 1970 one out of every two youngsters in this country is going to be knocking on the doors of some vocational educational program. I think unless we look long range now for the next 30 months—30 months from now we are going to have a serious crisis on our hands.

I am grateful to you for your forthright and daring statement, because I think it's this kind of thinking that is going to help us get the kind of education for the youngsters that they need. I want to thank you.

Mr. **Desmond.** Thank you. I would like to extend an invitation to both Congressmen, if you are in town tonight, to attend a conference the teachers are holding. There will be several cities represented, so we are going into this a little more thoroughly outside of the vocational education field, too. So if you are around, perhaps you can come in, and I do thank you for giving me the opportunity of appearing before you.

Mr. **Pucinski.** Thank you very much. Our next witness is Mr. Thomas Nayder, who is the executive secretary of the Chicago Trades Building Council. You and your fellow members have been in this business for a long, long time. As a matter of fact, I think the building trades have long preceded the whole concept of vocational education. We have invited you to appear before us this afternoon to perhaps share with us some of your views on how you think the Federal legislation can help stimulate job opportunities for youngsters in this area. The needs, of course, are constantly with us, as Mr. Desmond said, just a moment ago citing the Wall Street Journal. He said there are job openings for 2,050 electricians and machinists in the Bridgeport, Conn., area, but there are only 287 men in the area who have completed the necessary training; and this shortage of skilled help continues all over the country. Do you have any suggestions on how we can help in resolving these shortages?

STATEMENT OF THOMAS J. NAYDER, SECRETARY-TREASURER, CHICAGO BUILDING TRADES COUNCIL, CHICAGO, ILL.

Mr. **Nayder.** Well, we have prepared no statement at this level, Congressman. We are hoping you will excuse us at this level at least because we were not sure as to what direction we might be of help to you. If we are going to concern ourselves with the apprenticeship training and that aspect of vocational education we will at a later date supply you with a meaningful statement that will go into the record and be helpful to you. As a representative of the Building Trades Council which encompasses 100,000 workers in this community, well over 100 labor organizations in the building industry, it is true what you said that we were probably innovators at this early date in vocational education and developing the apprenticeship program, and we are encouraged not only to have this subcommittee come to Chicago and give us a chance to appear before it, but we are also encouraged by the participation of those students who were here earlier and gave us such a wonderful demonstration of their level of education, even though they are in a vocational system. For a long time the attitude about vocational education was that it was a student that we couldn't do anything with; let's shove him into a shop scene; he might be able to work with his hands, not with his brain. We hope as the years progress, legislation of this kind becomes larger and greater in its financial obligation toward vocational education, that this idea of vocation will become more and more necessary and advantageous to the student rather than to be considered as a secondary level of training for his future.

The fact that we're the end of this training pipeline as a labor organization and dealing with the conditions under which people are employed, we do have a great interest in what takes place on the level of training. However, we know we are pressed for time, and as I said if we have a prepared statement to give to you later, it will cover those areas in which you would like the labor movement to respond in abbreviated notes on the bill. You do raise some points which I would like to make some comment about.

First of all, you suggest that the postelementary school students be given greater counseling. We believe that from our experience it should happen earlier to that. In the elementary level there is a great opportunity to point students in the vocational direction and not prepare them just to the degree of a college level. We also believe that the parents of these students are in need of encouragement as well, and somehow to get the opportunity to demonstrate the vocational education is very important. So we hope that there will be some consideration given to the elementary level, not just the postelementary. We feel too that sometimes it is too late in the last years of school to give intensive occupational guidance. We feel that that should be going on all the time, not just in the last year of training.

We also, in the work study idea, are encouraged by the fact that you proposed the work will not displace employed workers in construction or in service contracts. This is very important and it bears out a situation which over the years has been quite an irritation to many of the old workers, that students and young people are getting opportunities for financial gain, and are displacing workers who really are the heads of families, and are requiring possibly greater income sources than just that of what the student might be contributing to the family; so we are encouraged by that fact, that you do not plan to displace the older worker, the employed person who might be affected by what is done in this bill.

The fact that you are going to disregard the compensation the student receives under that program, what the families of dependent children receive is important too. We found in recent work in the recruiting area for an apprenticeship by the urban league and the mayor's program for recruitment of the apprentices in the building trade, this did pose a problem particularly in the housing project where there was a degree of resistance offered by the families because if the youngster was taken into the program that had a higher capacity or higher earning level that it meant that this family might be displaced from their public housing facility, and this posed some problem so we hope that you will continue to press for that idea and to also perhaps raise the level of what is considered a poor family income for a poor family. These low-income families maybe are at too low a level and should be brought up a little bit.

In my work in the Chicago Commission for Youth, we found that this posed a serious problem to many families. The income levels were so low on the Federal standard that it wasn't really meaningful and it made it too difficult for youth to get into any of these programs that made provisions for compensation.

We like the idea of lowering the standards from the academic degree level to the experienced and skilled level of vocational teaching. We feel that many of our people who are trained for 4 or 5 years in an apprenticeship program and have a wealth of practical experience in the trade, that possibly they are more prepared to deal with the vocational education than many of the degree students who become teachers. With this, of course, goes the income level to encourage tradesmen to leave their high-paid jobs and go to vocational education programs. There is one other provision we want to see the record encompasses that is the fact that construction of any facilities that are under this act that Davis-Bacon standards will provide in the act.

Mr. PUCINSKI. That's already in the act.

Mr. NAYDER. So that as a representative of labor I wanted that to be in my record of statement before you. There are, of course, a number of things that we will want to talk to you about later, Congressman, as we learn more of what the directions are. We feel that there should be a greater encouragement to our youth to enter vocational schools for one thing, and enter an apprenticeship training program particularly in the minority communities which needs some enlightenment as to the fact that the doors are open under the apprenticeship programs as Chicago records will indicate that all of our training programs for the building trades have members of minority communities in it, and continued pressure is being exerted on the part of the labor movement to encourage the recruitment of minorities into our training programs. I would be pleased to answer any of your questions.

Mr. PUCINSKI. You have made excellent statement. I think you have certainly given us your thinking on some of the most important points of this bill. It occurs to me that we frequently hear people who oppose civil rights legislation and open occupancy and various other forms of efforts to give people equal opportunities such as equal employment opportunities. We frequently hear people say, "Well, you can't legislate these things. These are all a matter of education." I think that this bill is going to give these people an opportunity to demonstrate how sincere are they in this sort of conclusion, because this bill does provide vast educational opportunities to upgrade the skills of young people so they can come into the labor market and become part of the economic stream. I was very happy to hear you spell out some of the parts of the bill that you think can work toward that goal. Certainly if there is any merit to the premise, and I am sure there is, that education is the answer to our problems in the program and other problems we have in this country, this legislation can well help us find some of the answers.

This bill affords a tremendous opportunity for educating a lot of people who otherwise would not get this education. And it is very reassuring to hear your statement that this legislation is worthy of your support.

There is one question that I have, and I am sure you would want to comment on it. We've gone through a great deal of criticism in the past that in the building trades, in the building industry the young people were not given ample opportunities. I wonder if you could bring us up to date on what is the present situation as far as the Washington Trades School and the various other activities in the Chicago area. I know that you and the committee have been working closely with the board of education and the various other civil rights groups in the city in an effort to eliminate some of the inequities that have existed in the past.

Mr. **Nayder**. I would be pleased to summarize because if we would go into detail, it would be extensive, but at least 3 years ago—as a matter of fact it's longer than that—that when my predecessor appeared before the Roosevelt subcommittee that was here on equal opportunities we did review at that time the fact that to our knowledge there has been no complaints of discrimination in employment in apprenticeships brought to our attention. We, being the central vocal point of the labor trades movement, would be the obvious place where these complaints would come. There have been no complaints registered since that time, but so we can show some positive and affirmative action, we first of all encouraged our labor unions to provide in their agreement with the employer universal apprenticeship training funds, meaning that they would be supported by all of the employers in a particular industry so that it would provide a great opportunity for apprenticeship training. A cent per hour contribution to this fund meant that no single employer had to bear the weight of training of apprentices, and it is estimated that final cost of training apprentices is aproximately $10,000 to an employer. So by getting the industry to support it on a universal basis, we felt that that would be one way of providing a great opportunity to lower the resistance that was there in dealing with the equal opportunity problem.

This first step then encouraged liberal opportunities to present themselves. We then felt like people in the industry felt, and the educators and those who were involved in the apprenticeship training idea that there had been dissemination of information about the apprenticeship in order for it to reach all facets in the community. While we toyed with the idea privately, it was finally picked up under Federal support, and we have what is considered the finest of Apprenticeship Information Centers located in Chicago. This agency, of which I am vice chairman of the advisory committee, the Apprenticeship Information Center deals directly with this whole program of sending people from all levels of the community into apprenticeship training programs. This has resulted in an apprenticeship of minority people being in every one of our training programs of all the trades in the city of Chicago in the building industry.

So, we just briefly tell you that we feel that there has been much progress in the old idea of the father, son, nephew, and grandson lineage of tradesmen has pretty much been dissipated. We are getting more and more interest on the part of minority communities. We are not getting what we consider a universal interest. We have interest, as you noted of all the boys that were here today were all electronically oriented. But we have other trades that go begging for people to come in to them, painting, roofing, and cement mixing. Some of the harder and more difficult trades do not attract the numbers that there are openings for, so we have much to do to build up the image of these blue collar jobs. They are the hardest jobs. They are the dirty jobs. They're in all probability the better paid jobs, but this knowledge doesn't reach minority communities, so we want to encourage them at this level to become involved, so we haven't made much progress in this direction.

Mr. PUCINSKI. Does the Building Trades Council in this area engage in any educational programs on its own, or do you rely primarily on the school authorities to do this?

Mr. NAYDER. There are some uncertified programs being done by smaller groups in the building trades because their numbers are so small they do not fit into the vocational level.

Mr. PUCINSKI. What I meant, is there any effort being made to advise the young people in the minority communities of the job opportunities?

Mr. NAYDER. We personally have visited a number of vocational schools on a particular day to encourage participation in apprenticeship programs. Many of our labor representatives of various trades do likewise. We also through the Apprenticeship Information Center make sure that the information about apprenticeship programs is being sent to minority communities. I'm sure that our work with the board of education on that level is on a very high plane, and we hope that what we are planning now in an affirmative way to take bus loads of interested students around to construction sites at our expense to kind of dramatize the idea of being in the building trades will also be an indication of our sincerity to encourage their participation.

Mr. PUCINSKI. I am glad to hear you say this. I said during the lunch hour that this country faces the possibility of losing its role of dominance as an industrial center of the world. We have enjoyed that role for many years, several decades simply because we have had an opportunity to develop our industrial complex without severe bombings without any great interruption. Most of the powers of the world have gone through World War I and World War II and Europe was totally destroyed and had to start from scratch, but now in a sustained period of world peace and if we get Vietnam ended very soon, we foresee a long era of peace where the major powers are going to be able to develop their industrial potential.

This country, unless it develops right now a sufficient supply of skilled help in all fields, that includes the building trades, could slip into a secondary position. We are now starting to see France and Italy and Germany and the Scandinavian countries, Japan, even some of the Iron Curtain countries, developing their industrial muscle. I think that this legislation is designed to try and make sure that the United States maintains its role of industrial dominance throughout the world.

I'd like to hear that the building trades are coming to using all of our human resources regardless of their race, color, or creed.

Mr. NAYDER. We are really interested in your increased appropriations for vocational education. You are talking about industrial skills, and really they are second in line, because if they do not have the industrial buildings and facilities constructed by skilled workmen, there isn't the opportunity for the industrial skill to be developed.

Mr. PUCINSKI. Certainly, Tom, we are talking now about the next few years. We are predicting by 1970–72—this country is going to have a one trillion dollar economy and it's going to take a tremendous amount of skilled people to capitalize it to survive, it's going to take a tremendous amount of manpower.

Mr. **Nayder.** I am glad you said skilled. That is why vocational education is so important. It's not moving material from one location to another. Our work is numerically getting smaller. There are fewer people required to do the same type of work today as it was required 5 years ago. We have become more technical, automated much of our employment, and so we are really cutting down the number of people who might be needed to do the same amount of work. Because of the swell of things, we are going to need more people to do more and more work as our demand increases, but the fact we need them skilled to such a point where they can handle the machinery, handle the technician required to go into construction today. That is why we're so interested in what happens in vocational education.

Mr. **Pucinski.** We went through the sophisticated era of education in America where everybody felt you had to have a Ph. D., and a great education in human and social science and what not, but I think what Americans fail to recognize, as you look across the scope of this country and look at the industrial giants of America, the men who are today presidents of the big corporations, the men who have the vision of ingenuity, the understanding, the grasp, the depth, who are the presidents and chairmen of the board, and you look at their background, invariably you will find, with few exceptions, these fellows started out somewhere down the line in some obscure position working with their hands, and their skills. Once they had developed their skills, then they used some of the talents we saw demonstrated by these youngsters. Between the two they moved rapidly up in the corporate structure in the companies that they now have. I wish we could get this message across to the American people. The whole industrial system needs skilled people. It does not mean they are going to be working at a skill for the rest of their lives or laying brick for the rest of their lives. It means that this is the beginning of what can be a tremendously productive career and frankly the sky is the limit as to where they can go with this skill.

Mr. **Nayder.** That is true. Those who have come through the apprenticeship program have been brought up to date as to the trends in their job, and many of them become foremen, supervisors in a very short time and as a result move up into managerial positions, and ultimately ownership of many of our leading construction firms. As a result, of course, we have a different type of industry than you have got. We have men who worked at the ranks, but also moved up into managerial positions, so our relationship remains fine.

Mr. **Pucinski.** You have been very helpful to us in giving us a better understanding of what role this legislation can play.

Mr. **Nayder.** There is one other item, I don't mean to belabor my testimony, but the fact that you provide for some works of art in the building that you are constructing for these schools is meaningful to us, as well. The world of work will not possibly be an 8-hour day or 7-hour day and 5-day week that we know it today. It may be completely shifted around as years progress. There is going to be a need for development of leisure time for the worker. How he is going to handle himself during this leisure time, if he has been exposed to something of value in the way of works of art and development of his intelligence along those lines, I think that it is very meaningful. It should be encouraged.

Mr. HAWKINS. I, too, am very pleased to know that you have had progress in the development of the apprenticeship training program. However, is this merely an increase that started for low percentage and is still low? Do you have any idea of what has been the percentage gain over the period that you speak of?

Mr. NAYDER. When the mayor introduced this recruiting drive in December of 1965, there was a goal set of 100 Negro apprentices to be introduced in the program during that year.

Mr. HAWKINS. One hundred out of how many?

Mr. NAYDER. I would think that our group was around 2,000 apprentices at that time. We wanted 100 additional minority youth brought into the program.

Mr. HAWKINS. And how many were there in the program?

Mr. NAYDER. I would suspect it was about the same number. The last report about it from the Bureau on apprenticeships in training who have been involved in recruitment drives tell us we have exceeded that. It is somewhere around 150 during this period, and there has been almost marked change in the attitude of the various trades, because now enrollment periods have been lengthened. It's evident from the physical standpoint that minority people are making applications, and the building trades unions have sworn their sincerity by using the facilities of the Apprenticeship Information Center not only to recruit, but to test and to aid in the selection of process for an apprentice going into their programs.

Mr. HAWKINS. So that while it's roughly 150 percent increase, the actual numbers involved would be very small as compared to the total number of apprentices, is that not so?

Mr. NAYDER. We believe it's too small. We think it should be higher. We haven't really had the response from the minority community or swell of applicants approaching us.

Mr. HAWKINS. Do you have any idea why?

Mr. NAYDER. We are not quite sure. There was a Federal team out to see us a few weeks back. They weren't sure. That was why they were here, to see why there wasn't more minority people being encouraged to enter this program, so we introduced this idea of affirmative action by taking bus loads of kids around to construction sites, because we believe that might be one way of glamorizing the work and getting them to become interested in blue collar work.

Mr. HAWKINS. I think Mr. Desmond said something about there being shortages in two fields, one of electricians and the other machinists. I assume these also are two skills which there are shortages in this particular area.

Mr. NAYDER. We can't speak for the machine trades, because we are in the building industry, but the electrician at this point, anyone who has the skills can find a job. There is no one wanting a job in electrical work.

Mr. HAWKINS. Then do you have apprenticeship training programs in that particular skill at this time?

Mr. NAYDER. Yes, they have a class of about 200 each year that are brought into this program. They have just recently had an enrollment period of 5 days. Anyone wishing to apply for an apprenticeship was welcome to do so, including girls.

Mr. HAWKINS. During this recent period do you know whether any minorities were among the applicants?

Mr. **Nayder.** Yes, sir. At least 20 percent of those who applied were from minority communities.

Mr. **Hawkins.** Thank you.

Mr. **Pucinski.** Thank you very much, Mr. Nayder. We are most grateful to you for taking time out of your busy schedule to testify on this legislation today. I think you made excellent suggestions which we are going to study very carefully, and we'll see if we can't incorporate some of them in the provisions in this bill.

Mr. **Nayder.** Perhaps when we are in Washington in June with the national legislation meeting, you will give us another opportunity to discuss this matter with you.

Mr. **Pucinski.** We are going to need a lot of help with this bill because of concern by the Bureau of Budget. The testimony has shown us where we might save money in other programs. I hope maybe you might consider putting this bill on your legislative agenda, because I think your support will be meaningful, in terms of trying to close some of the gaps that you and Mr. Desmond and others have talked about today.

Mr. **Nayder.** I am sure the department will do that.

Mr. **Pucinski.** Very good. Thank you very much. Our final witnesses for the day are Herbert Herman, Bureau of Adult Public Education; and A. N. Landa, director of welfare rehabilitation; and Mr. Scott, director of Project Breakthrough. I wonder, because of the lateness of the hour if we could have Dr. Rotella join this panel. I think perhaps between the four of us we can move rapidly. I want to apologize to you gentlemen for prolonging your stay this afternoon. I think you heard the previous testimony, and it has been interesting.

Gentlemen, do all of you have prepared statements or do you just want to take it off the cuff and just make a brief opening statement, then we can develop some questions. Could we perhaps do it that way, Mr. Herman. You gentlemen are familiar with the problem before us, and I am sure you have heard a great deal of the testimony. We will be happy to have you proceed in any way you wish, and perhaps each of you would like to give an introductory statement.

STATEMENT OF HERBERT HERMAN, CHIEF, BUREAU OF TRAINING AND EDUCATION, COOK COUNTY DEPARTMENT OF PUBLIC AID, CHICAGO, ILL.

Mr. **Herman.** It is a privilege to represent the Cook County department of public aid before this subcommittee and present views based on our experiences and observations of programs of training and education.

I would like to confine my remarks to the problems of public assistance recipients and the Cook County department of public aid's approach in resolving these problems. A statistical analysis of financial grants for the month of January, 1967, of aid to dependent children of Cook County gives us some idea of the extent of the problems. The total active caseload was 37,831, which represented 180,759 persons receiving public assistance. This latter figure represents children up to age 20 still attending high school or a technical school. The reason I point these figures out to you is because if you are to examine proposals for legislation of any aspect of education, particularly vocational education, then I ask you to consider the needs of all people, including those whom we serve on public assistance. The need for vocational education is very great. We already know this. But let us address ourselves to the questions as to what characteristics vocational education should have and how best it can be organized and conducted.

First, of all, we would like to see the high schools have a greater holding power on the youth in our community. In our agency's program for school dropouts which was funded under title II of the Economic Opportunity Act, we employed every method in counseling young people to return to school. Despite all that is being done through guidance and counseling, large numbers of youths do drop out of school. At present there exists a labor shortage, and for a brief time the school dropout often does secure employment. The social, economic, and emotional problems of an ADC family are of such a nature that family pressures are often exerted on the individual capable of contributing to the family to induce him to go to work. We as an agency do everything possible to encourage students to stay in school. But I would remind you that the average financial grant per case is $251.57 a month and the average per person is $52.24. I think we can understand why a young person in our affluent society finds it hard to resist the attractive temptation for earning money.

The amount of basic and technical preparation required for success in jobs practically excludes these persons from employment—employment that is meaningful, dignified, and of value to the individual. I believe we must increase the basic occupational preparation at the high school level. The high schools must concern themselves with vocational education. In Chicago some outstanding progress has been made and is being made by the Chicago Board of Education Division of Vocational Education. The new Westinghouse Vocational High School is a splendid example. There are eight other vocational schools in Chicago. We need more of them. We want to see our young men and women become the highly skilled and knowledgeable technicians of society. Give them the opportunity and the young people will be the machine builders, machine installers, instrument technicians, data processors, designers, draftsmen, programers, and mathematicians.

The Cook County Department of Public Aid has seen hundreds of its ADC recipients graduate as keypunch operators, and office machine operators. We have a training program which trains women to operate complicated electronic machines. This program is run in cooperation with the National Cash Register Co. We desire—nay, we require—more and better educational preparation and training for those who have only known discrimination and despair. In programs run by the Cook County Department of Public Aid we see potential brainpower that has never been appreciated nor given a chance for fulfillment. We want to train people to be technicians. The type of vocational education envisioned goes beyond the requirements of any one trade. The vocational education, we see, is one which prepares technicians in the areas of chemistry, electrical technology, highway maintenance, and mechanical technology. We know the need for technicians in health services, food preparation, and business controls. We want programs to provide this training. We want to develop the potential of the 180,000 persons in the ADC category to contribute to modern society in every way. We want to see vocational education programs offered so that those with the ability will get the opportunity. The place to begin is in the high school. I believe the American public school system can serve its historic function by providing the education which meets the needs of the people. The private sector performs a valuable function in the area of vocational education. However, I believe that in the long run the vocational education base in the public schools must be strengthened. The program run jointly by the Cook County Department of Public Aid and the Chicago Board of Education has given thousands of people a new lease on life. Our two education and training centers in Chicago at Westinghouse Vocational School and at Doolittle School, funded under title V of the Economic Opportunity Act, are providing vocational skills, education, child care, and all of the necessary social services. We want six more centers just like these two in Chicago, and we are working to make this a reality.

The Cook County Department of Public Aid conducts training programs in cooperation with hospitals, clinics, private enterprises, and public and private schools. The resources of the manpower development and training programs have provided training for many thousands. The Cook County Department of Public Aid's Welfare Rehabilitation Service places hundreds of recipients of public assistance into decent paying jobs each month. We know that people want jobs, but jobs which give meaning to their lives.

In conclusion I wish to call your attention to the levels of Federal, State and local coordinating committees which have recently met to plan coordinated action on training programs. Representatives of the Department of Labor, Vocational Education, Rehabilitation, Adult Education, Office of Economic Opportunity, welfare and the private sectors are meeting together to plan together, and I hope give better services. The plans of all of these departments and agencies should be seen in the context of the total needs of society. What is needed is a willingness on the part of each agency and department to take advantage of what has been learned by each one's separate program, and incorporate these approaches into a coordinated attack on the problems.

I will speak on behalf of the agency, and then Mr. Landa will speak on specific areas. Each one of us wants to point out certain things that are of interest to us, and particularly in regard to this legislation. I think you know the Cook County Department of Public Aid has been involved in adult education programs for a long time. I think some of the previous speakers and some of the young people here indicated a great need for education and vocational education particularly in regard to the welfare problems in Cook County in Chicago. We certainly have to consider the parents of the young people as well as the young people themselves. We have a tremendous amount of available manpower, intelligent persons who have never had an opportunity and who have been socially and every other way deprived of the riches of an affluent society. The Westinghouse School has been mentioned, and I think you should take note that the Cook County Department of Public Aid has a program there whereby recipient mothers bring their small children and receive basic education and vocational training at the Westinghouse School. The basic education problem, the literacy problems have had a long and interesting history. The average age of a person in our basic adult program in the evening, and other daytime centers, is about 35. To ask a person of that age to go to school to learn to read and write is a meaningless thing. If a person does not see a job as the outcome he is not highly motivated. And, therefore, if people begin to see the importance of vocational training, if they can participate in that and know that at the end of this training there is a skill that they have acquired and a job waiting for them, the motivation and desire are much greater. The Cook County Department of Public Aid has been conducting training programs, vocational training programs; our Yellow Cab, wood finishing, food preparation, and, of course, National Cash Register and keypunch programs have been outstanding examples and have reversed the trend in Cook County in regard to welfare. I think this is very significant. I personally would favor your bill, every phase of it, and particularly the exemption for the low income person because this is a high factor that motivates them, and it means a great deal to people.

STATEMENT OF A. N. LANDA, DIRECTOR, WELFARE REHABILITATION, CHICAGO, ILL.

Mr. LANDA. My justification for being here is that I have been involved for nearly 15 years in working with the school dropouts, 16 and up. The Cook County Department of Public Aid has been struggling with this for many years. I think I know something of the problems, and from that standpoint I would like to discuss two items in this bill, and I hope that we can consider these suggestions.

The first point is that it is like all other bills, it shies away from the private enterprise. It enters the nonprofit aspect, institutional aspect, et cetera. All of these are very fine, but our experience is this: Until you, and unless you, involve industry deeply and in such a way that they can participate in the total thing, we fall short. Perhaps the two best examples of industry involvement is the Job Corps, but that is a contract plus basis, and business goes to the Government institutions, and so on. Here, locally in Chicago, we probably have one of the very finest efforts on behalf of the school dropout. We in Cook County have participated in this very fully. We have referred hundreds of kids to this program. It has involved industry up to a point, but not sufficiently, and the results show it. In the first 18 weeks of this program nearly 800 youngsters were processed. At the time of the second report which is only about 2 weeks old, only a hundred of that group were working. So there is something wrong there. What needs to be done?

I see it as involving what we are doing now, and bringing business into it in such a way so that they are not frightened away by the enormous cost and great risks involved in lowering their standards, and bringing the youth into the program, the youth needs rather than the industry needs.

You have to take the youth as he comes and mold him in the needs of the community. This business of searching on a high standard basis is not doing the job, and so my suggestion is that you consider seriously how industry can be involved in this very worthwhile enterprise, and when you are emphasizing innovators and imagination, you are on the right track; but maybe you can fit industry in a little more.

Mr. PUCINSKI. I think you are making a good point, and perhaps we are going to have to strengthen the language to make clear what we mean when we say that the Commissioner may contact private agencies, organizations, or institutions, because we mean employers, and we do mean industry in this language. We'll do it in the bill, or we'll do it in the report, but it is one of the intentions of this particular provision, section 201, to provide the wherewithal for a close cooperation between the private sector, the employer, the industrialist, where they can make a substantial contribution toward developing greater skills and training. So your point is very good.

Mr. **Landa.** Nonprofit is repeating itself in this bill.

Mr. **Pucinski.** Now, under section 201, it does not mean nonprofit. You will know the language. We probably will have to make this point clear, simply because it does need some further definition; but it says the Commissioner also may make grants to other public or nonprofit private agencies, organizations, institutions or contracts for public or private agencies, organizations, or institutions when such grants or contracts will make an especially significant contribution to obtaining the objectives of this subsection.

Obviously, this language does need further clarification, because I can see where it might be interpreted incorrectly, but the Commissioner in testifying on this bill made it very clear that he construed the language to mean that he could enter into an agreement with a profitmaking organization or a profitmaking industry if indeed such a contract would make a contribution toward obtaining the objectives of this subsection, but this language will be clarified because your point is a very well taken point.

Mr. **Landa.** My other point is, I fear that the school dropout who continues to be of school age is being neglected. On page 11 it does refer to residial schools for kids, 15 years and up, but I would like to see emphasis on the continuation in school the kid whom nobody wants. There isn't a program in the country with the exception of the Job Corps that gives really any attention to this, believe me, and I can get all the school dropouts of continuation school age that will do nothing but roam the streets.

Mr. **Pucinski.** Aren't they being picked up by the existing programs?

Mr. **Landa.** Only under extreme pressure and only limited numbers, because after 6 months there is no place to put them. The program must be such that it extends from 16 years—in Illinois 16 years 1 day—to 18. It must be at least 2 years in duration and have the continuity to it, and it involves a great deal of money. You are trying to save money. This wouldn't save money, but it will get the job done if you can do it, because these kids are being neglected.

Mr. **Hawkins.** Do you have skill centers at the neighborhood level that provide programs for these dropouts?

Mr. **Landa.** Not enough. There is not enough attention. We are meeting with various agencies just to begin to struggle with this, but until we have help from you and the whole Nation, it isn't going to be done.

Mr. **Hawkins.** It was my understanding that the Department of Labor is financing skill centers that provide training allowances at the same time as the component of these skill centers. Now, probably we do not have enough of them. A few do exist in the Los Angeles area, but there again I quite agree with you that they are too few and they are not really reaching enough. Assuming that there were additional ones, and/or that training allowances or other financial assistance programs could be provided with vocational education as components, would this attract these students?

Mr. LANDA. Yes; plus an imaginative innovated type of services here and a lot of coordination and bringing industry into this, too. We are a long way from having solved this problem, and certainly appropriation isn't going to do it either. It has to have emphasis, and if it's possible I would like to see some emphasis being placed on that item in this bill, and that completes my statement.

STATEMENT OF A. LOUIS SCOTT, DIRECTOR, PROJECT BREAKTHROUGH, CHICAGO, ILL.

Mr. SCOTT. One of the most interesting and challenging projects to emerge during the year of 1966 is "Project Breakthrough," which undertakes to teach disadvantaged 4-year-olds the art of word recognition through the use of computer-based machines known as "talking typewriters."

Project Breakthrough is an educational program for underprivileged children whose families are receiving public assistance in Cook County, Ill. The project is authorized and funded through a contract dated May 15, 1966, between the U.S. Office of Economic Opportunity and the Cook County Department of Public Aid.

Breakthrough is a unique educational program in a number of ways. The children this project serves are very young and very poor. They range from 3½ to 4 years of age and their parents are receiving public assistance. Their parents are also known to be either functionally illiterate or in need of further education if they are above the level of the functionally illiterate. The project does not offer to these children a didactic educational experience nor does it employ trained, certified teachers from a formal background of didactic education to provide the basic learning experience. Rather, it offers to the child an autotelic or self-rewarding exposure to a learning opportunity and provides an environment for the learning process which responds to the child instead of directing him.

A unique feature of Project Breakthrough is the technique through which it offers to the child the basic learning experience. This is achieved through the use of Edison Responsive Environment machines which were designed by Dr. Omar K. Moore and Richard Kobler, developed by the McGraw-Edison Laboratories in West Orange, N.J., and marketed by the Responsive Environment Corporation.

Funds for the conduct of the 12-month program were made available to the Cook County Department of Public Aid through the medium of a contract negotiated directly with the Office of Economic Opportunity, Washington, D.C. The Chicago public school system is interested in the eventual application of the "Talking Typewriters" to regular school use and is cooperating in the program.

On August 29, 1966, in temporary quarters at our Garfield District Office, fourteen 4-year-olds recruited from nearby public assistance families showed up for their first experience with the "Talking Typewriters."

Three booths containing all the complex equipment which makes the "Talking Typewriter" almost human had been set up and were operating flawlessly. Adjacent to the machine area a complete nursery area, similar to a standard "Head Start" operation, was staffed and ready to receive the youngsters. Trained specialists in machine programing were standing by the booths, nursery attendants were poised with paints and brushes to initiate the very first phase of the program, finger painting and the project was underway.

Two months later, youngsters who did not know the meaning of an A, B, or C recognized all the letters of the alphabet and many were able to relate them to words; they knew and named the eight colors on the typewriter keys and on their fingernails; they communicated with each other and with the Project Breakthrough personnel where first there was only stony silence; several were typing their names, "Tommy," "Malcolm" and "Roger"; they had learned the meaning of words and phrases, and daily association with the "who said that?" Machines had become a welcome part of their daily lives.

On Monday, October 24, 1966, the three machines at Garfield were placed in operation at the permanent project site, the Westinghouse Vocational School at 3301 Franklin Boulevard, together with two additional machines, making a total of five. Early in December of 1966, five more machines were placed in operation at Westinghouse and the full experiment potential was reached.

Children from the Garfield office are transported by bus to the Westinghouse school, starting October 31, 1966, together with groups from the Cabrini Homes office, the Henry Horner and Jane Addams homes areas. A fifth area is still to be utilized. By early December 1966, 4-year-olds were arriving at the project site each day, 30 each from four different locations. Another 120 children, matched in age, intelligence, reading ability, and family environment, act as a "control" group, and all of these children have been subjected to the same batteries of tests, including IQ, reading ability, social maturity, vision, hearing and complete physicals. All of the mothers (in some cases fathers) have been tested for reading readiness. All of these tests will be repeated at the end of each 9-month "semester," and carefully analyzed for inclusion in the overall findings of the research design.

This new and original research design has been constructed by the Cook County Department of Public Aid for use in measuring every possible effect the program may have on the child and his entire family, administered by four special caseworkers and a supervisor assigned to the task of projecting this instrument to not more than 30 families each.

A copy of the research design and a copy of a report which measures the various levels of achievement of children in this program over a 4-month period are attached to this memorandum. Additional copies of these two reports are available upon request.

We would like to quote from the summary of the evaluation report of children in the project:

> On September 6, 1966, twelve children, all of whom come from a culturally disadvantaged home with a functionally illiterate environment began participating in the Chicago Project Breakthrough, utilizing the Edison Responsive Environment Talking Typewriter. After an average of 51.33 sessions of approximately 12.427 minutes, or an approximate total of ten and one-half hours in the ERE laboratory enhanced by participation in the ERE nursery, these twelve children have become able to identify upper case letters in isolation or in context. Some have gone beyond that and two are able to recognize sight words. In addition, these children have progressed in the nursery area significantly to a

point beyond that which can be ascribed to normal maturation. At the beginning of the program, the mean performance of the group was below normal. As of the cut-off date, four months after beginning, all children are performing at a level above average.

At the same time, the child's participation in the ERE program is apparently having no insignificant affect on his home environment. For, while it will remain for the future Family Functioning Instrument to indicate accurately, we can at this point estimate that in no case is a parent disappointed or dissatisfied with his child's participation or progress.

Also important are the attempts being made to accurately quantify the progress of the child. It is this progress which, when reported, will truly indicate the success of the program. But even without quantification, without formal progress reports, success will nevertheless be demonstrated. There are twelve young examples of success included in this paper—and there are approximately one hundred more waiting to be reported.

Mr. Scott. Perhaps my story is going to be extremely short. I don't know how I got into this, Congressman, except that if this program had been in existence 12 or 13 years ago, it might have changed the tenor of this hearing, but it wasn't. It has to deal with preschool education of disadvantaged children who are members of families on relief and whose parents are illiterate. I have given you a prepared statement on this, and think I will therefore rest my case here, because to do justice to this wonderful program would take 6 or 7 days in my belief.

Mr. Pucinski. Well, I think that you are right. If we had your program a long time ago we wouldn't have some of the problems that we have now, so for that reason we had invited you to participate. Your statement, of curse, is part of the record and will be part of the record. But we want to get the whole package together, and I want to emphasize one thing, gentlemen. I think that you, Mr. Herman, first, and of course, Mr. Landa, you point out one thing. This is what we have been trying to say in supporting all these programs; the Poverty program, the Aid to Education programs, the Adult Education program, the Manpower Retraining program, and now the Vocational Education program, the American people must be fully informed that these all are investments in people, they are not motivated only by sheer ultraism. There is, of course, a moral factor involved here in that we, as Americans, define poverty as denial of opportunities, repugnant; but looking at this as a businessman, this is an investment in people, and once this investment finds its full maturity the returns are beyond estimate.

I don't know whether you have a dollar volume or dollar figure, Mr. Herman, on what those 180,000 people that you have on the Public Aid program in Cook County is going to cost the taxpayer over a period of time, starting from the time they are born until they drop out of school, until they wind up in a detention home, until they wind up at St. Charles or Pontiac, Joliet, and what effect this is going to have on the youngsters that they leave along the way, and, of course, all the problems along the way. So what I am considering—and Mr. Hawkins and those of us who have been supporting these programs—is if we can put this whole package together, we can then start looking toward the day when these huge expenditures that are self-recurring and really not productive are going to come to an end. Your testimony this afternoon is important only because it puts into the perspective what the cost to the taxpayer is, and will continue to be, if we do not do the things that we are now considering before this committee. In other words, the alternative to an effective vocational education program is in my judgment, to continue spending huge sums of money month after month after month on welfare programs, and with the continuing loss of human resources at the same time. So, I'm grateful to you for your testimony because you have put this in a very important perspective.

Congress can't very well evaluate this legislation unless we have an idea as you have given us from your statement, Mr. Herman, on what the alternative is to no action. This is what we continually tell the opponents of this legislation, what will it cost you if we do nothing, and that's the test.

Sure, they say these programs cost a lot of money. We are talking about $400 million. But what is the alternative if you do not do it? It's to continue to give a lot of people in the county a hugh sum of money to continue these people on public aid.

We in the State of Illinois now spend, I believe, $690 million every 24 months on public aid just in the State of Illinois. Just imagine what we could do with this money if we could find the wherewithal to put these people into some productive experience where they are gainfully employed and are able to carry their own load. You would relieve the burden of the taxpayer of this State by most, if not all of this $680 million every 24 months. I am going to tell you something. These bills are frequently criticized by some of our opponents, but the average man on the street in America is smart enough to understand what we are trying to do. So Mr. Gallup makes a public survey. He finds 78 percent of the American people, despite their criticism, support the Poverty program; and he finds the vast majority of the American people support Federal Aid to Education, and they support the Manpower Retraining program, and they are going to support this Vocational Education program. The man on the street knows this is an investment in human resources—as one of you gentleman said in your statement. Your statement is extremely valuable to me.

We will get to Dr. Rotella in a minute. Gentlemen, is there anything you want to add.

Mr. Landa, your suggestions are very good, and I am glad you made them because we are going to see what we can do with regard to them. I might suggest that if you wish, if you have any specific wording that you think we ought to try out for size, why don't you get a copy of the bill if you don't have one? Why don't you drop us a note and suggest where we could make the changes.

Our final witness for this evening is Dr. Rotella.

STATEMENT OF SALVATORE G. ROTELLA, DIRECTOR, PUBLIC SERVICE INSTITUTE, CHICAGO CITY COLLEGE, CHICAGO, ILL.

Dr. Rotella. The proposed bill, H.R. 8525, which is meant to amend the Vocational Education Act of 1963, raises important considerations for our society in general and for education in particular.

The purpose of both the law and the proposed amendment is to help the States meet essential needs that have been neglected due to lack of financial resources. The Federal Government enters into long-term agreements with the States to remedy, through education, a serious lag.

Educational institutions, which traditionally have a tendency to shy away from the practical and the immediate, thus are stimulated to maintain closer touch with reality. In a democratic society, such an interaction between the guardians of the public interest and the schools is desirable and healthy. The fact that the actual administration of funds is handled by State authorities means that the act and the proposed amendment fit into the historical pattern of the Federal system of Government of the United States.

Through the Vocational Education Act, the Federal Government has created a challenge for educational institutions. Such a challenge is accompanied by the possible danger that the resources made available by the act could be of limited value if we fail to consider present needs in terms of implications for the future.

Social scientists tell us that our society has entered the postindustrial era. For educational institutions, the real challenge of the resources made available by the act is not merely to attack the problem of present vocational needs in our society, but to experiment with and plan for educational and training activities that will anticipate future problems as well. Educational institutions may not have at any given time a ready remedy for all problems; often education may not have even tentative answers to show the way to alternative solutions. Education can, however, search for answers through research and experimentation. I am happy to see in the proposed amendment a concern to stimulate "innovative and exemplary programs or projects designed to serve as models for use in vocational education programs."

Given the nature of the rapid socioeconomic changes occurring in our society, it is the essential function of education to help individuals cope with change and to prepare them for roles that are meaningful and satisfactory. In today's world to prepare the individual for employment is not only to equip him with the basic skills necessary to function properly on the job, but also to give him the necessary understanding of the changing nature of his total environment. In the 20th century it is not uncommon, as we hear repeated again and again, for an individual to be forced to change jobs two if not three times in his working life.

Inservice educational programs as well as career oriented programs for high school graduates must be broad in scope and must have a solid foundation in general education if the individual is to be enabled to face the occupational changes and displacements resulting from technological progress. Narrowly conceived educational programs dealing strictly with the "nuts and bolts" aspect of any vocation may only impart today skills and knowledge that will be obsolete tomorrow.

The attempt of the proposed amendment to strengthen the quality of vocational education instruction by creating inservice training for faculty, as well as short term and academic year institutes, is commendable and should enable educational institutions to develop quality vocational education programs for an increasingly complex society.

VOCATIONAL EDUCATION IN THE PUBLIC SECTOR

Sound vocational education programs could be developed in many areas. Immediate priority, however, should be given to the public sector. The ever-increasing services that government is asked to perform, especially at the State and local level, and the growth in number of employees required for an adequate and economic performance of such services pose serious problems, especially for large metropolitan areas.

Many of the services characteristic of the postindustrial era, into which our society has developed, belong to the public sector. To neglect public service for too long may prove a risk for our society. Employment in the public sector for all levels of government has more than tripled in the past three decades. The number of employees at the Federal level of Government doubled in the decade 1940–50, but it has remained somewhat stable since then. The growth in number of individuals employed by the Federal Government is far less dramatic than that at the State and local level. The curve for these two levels of government combined remained just under the 3 million mark from 1929–45. Since 1945, it has gone beyond the 7 million mark and forecasts for the future promise further expansion. The need for teachers, policemen, firemen, and public health personnel, all of them engaged in traditional local government functions, is expected to rise by nearly two-thirds by 1975.

Trends indicate that more rapid increase can be expected, especially among white-collar personnel. Jobs for the unskilled are dwindling rapidly at all levels of government. In the last decade, government white-collar employment has expanded about 50 percent. This is double the growth achieved for such workers in employment in the private sector.

THE CHALLENGE TO COMMUNITY COLLEGES

Institutions that are community rooted and community oriented, such as the junior colleges—and especially those in large urban areas, cannot remain immune to the implications that such trends have for education. The large number of community colleges that have developed throughout the country can perform a unique function in preparing personnel for the middle range positions. This is one way in which these institutions can live up to their avowed purpose as community-oriented institutions. The demand for qualified personnel at the middle-level grades of civil service is a challenge for 2-year colleges as well as public personnel agencies.

There is a growing danger that the quality of the services to be rendered to our society will be far below the expectations of the standards of excellence that have been prescribed by various statements on goals for the Nation in recent studies. More attention must be focused on broadly based educational programs for the growing numbers of public service employees—the social workers, policemen, State and local inspectors of all kinds, and public health personnel, to name just a few—who come into contact with the public in the course of performing their work. Such programs must encompass fields such as communications, behavioral and social science, as well as specific training objectives.

The challenge calls for a considerable effort by public agencies, civil service commissions, and educational institutions to assess the magnitude of the problem and to work out realistic solutions. A survey of present job descriptions in many areas of public service will reveal that it is not uncommon for jobs to carry educational requirements that, in some cases, could be considered inflated. In the field of social services, for example, professional personnel are traditionally required to hold the M.A. degree. Some of the functions involved in present job descriptions could be performed in job titles with lower educational requirements. Many routine tasks presently performed by social workers could easily be performed by assistants, thus enabling the top professional people to operate at the level for which they have been trained. In the field of education, for some years there has been a demand for teacher's aides. Individuals with some training in the traditional skills of education could perform tasks of a routine nature under the supervision of teachers.

In the private sector, which operates without the rigidity of the employment practices of the public sector, a process of development of subprofessional categories has been going on quite effectively for some time. A simple look at a neighborhood medical office will show how effectively the process of medical care has been structured. Receptionists, nurses, laboratory technicians, and laboratory assistants today play roles as familiar to the patient as the more traditional role of the medical doctor. Each individual has received training commensurate with the nature of the job he or she is performing.

Job classifications and job descriptions, especially at the local level of government, must be reevaluated. A survey of such descriptions and classifications in the Chicago Civil Service Commission shows that between grades 8 and 11 about 50 job titles could be adjusted upward or downward in terms of educational requirement to permit entry into such jobs of graduates of 2-year institutions upon their attainment of an associate of arts degree.

The Federal Civil Service Commission recently has set up a special entrance examination for graduates of 2-year colleges. Similar interactions between public agencies and educational institutions can help meet the need for governmental employees of high quality whose skills will be needed in ever-increasing quantities in the coming years.

THE CHICAGO CITY COLLEGE AND EDUCATION FOR THE PUBLIC SERVICE

A public service institute operating on the campus of Loop College was established in 1966 with funds from the Illinois Board of Vocational Education, the Chicago City College, and a private foundation. Operating as a special administrative unit of the college, the Public Service Institute coordinates the efforts of the school in the area of public service. The Institute has three essential functions: (1) To develop and administer programs for high school graduates leading to careers in the public service; (2) to provide people already working in public service agencies with educational opportunities to update and upgrade their skills; (3) to conduct necessary research and explore more generally the role of 2-year collegiate institutions in the area of public service.

Types of Program Set Up Under the Public Service Institute

A. Preservice

Preservice programs will be set up in six broad areas which should encompass the wide gamut of middle range public service categories: in the areas of administrative services, technology and engineering, public safety, health, social services and education. Programs are being developed, or will be developed as soon as resources become available, in each category in cooperation with the appropriate governmental agencies. In some cases the concept of work-study programs will be used. In others, summer internship in government agencies or some other form of on-the-job training will be made part of the program. Undoubtedly, proper counseling and a faculty particularly sensitive to the general scope of the program will be crucial to the success of these programs. The limitation in resources has made it impossible to do much beyond the level of local government. However, in large metropolitan areas such as Chicago, this is a most appropriate level of operation for a city college.

As programs are developed, much attention must be paid to maintaining as clear a distinction as possible between education and training. The agencies involved and the college have complementary functions to perform in preparing the students for entry into public service.

The college must stress education; the agency will eventually develop on this foundation whatever training the individual will need to discharge his obligations as an employee. Hopefully, training should change from tedious repetition of routine tasks between nine in the morning and five in the afternoon to meaningful actions which the individual begins to understand and appreciate as part of a larger effort.

A program in the area of law enforcement has been established under the Public Service Institute and will begin operating on the Loop Campus both on a preservice and an inservice basis as of September of this year. This program has been the result of intensive and successful cooperation among the institute, the Chicago Civil Service Commission, the Chicago Police Department and some senior colleges in the Chicaga area. It is hoped that upon completion of the program a student, depending upon his career aspirations and performance will have the following choices: (1) Immediate entry upon successful completion of civil service exams into the Chicago Police Department or the police force of other governmental jurisdiction; (2) transfer to a senior institution with advanced programs in law enforcement.

All students enrolled in the Loop College law enforcement program will take courses in general education, social science and law enforcement. Students considering immediate entry into the police force will receive the necessary training at the Chicago Police Academy. Along with such general education courses as English composition, biological and physical science, and humanities, the students will take courses in general and urban sociology, general and social psychology, and basic elements of public administration. These behavioral science courses constitute a core essential to all public service programs. Courses in law enforcement offered in the college will cover areas such as the development of contemporary American police systems, basic elements of administration of criminal justice, police organization and management, and issues in law enforcement.

I have gone into some detail in describing this program in order to show that a collegiate institution can do much to prepare people for vocations without necessarily teaching the specific on-the-job skills. Such skills can be taught better by the specific agency after the completion of a sound educational program. In this case, the Chicago

Police Academy will offer the special training required of all police officers in the city.

B. Inservice

In the area of upgrading and updating skills of individuals presently working in government agencies, the Public Service Institute of the Chicago City College has been working closely with the training division of the Chicago Civil Service Commission. With the assistance of the staff of the Civil Service Commission, 26 courses were selected earlier this year to be offered as a form inservice training to City of Chicago employees. The subject matter covered in these courses ranges from accounting to microbiology, and from public administration to report writing. About 1,000 city employees expressed an interest in taking these courses. After proper screening and placement, about 600 persons were admitted to the program.

The city administration recognized the value of the program and gave permission to city employees to take courses partially on city time and partially on their own time. The city invests time in these employees by releasing them from work half an hour early twice a week for the academic term. This investment will prove its value if, upon completion of the courses, the employees can perform their functions more effectively and more intelligently.

For the individual civil servant, these courses may very well be an opportunity to acquire the skills and knowledge necessary for passing the next civil service exam leading to a better job. Obviously, this represents a step in the direction of the goal of helping people operate at a level closer to their potential.

When the various preservice programs in the areas indicated earlier have been developed, and when more counseling services are made available to the college, adults who now can elect only one inservice course each term, could plan their educational efforts around sequences of courses leading towards a meaningful educational objective. Counseling would ultimately be the key to achieve this goal and for the effectiveness of these programs. Qualified counselors would relate the educational effort to the often generalized desire of the individual to advance himself.

The Public Service Institute also is performing a much needed function in the area of educational services. A recent survey of the field of preschool education revealed that many individuals are working in preschool centers without sufficient educational training. The Loop College program is presently offering four courses in the field of child development to over one hundred individuals who work in preschool centers, but who are unable to qualify for State licenses.

CONCLUSIONS

The programs that I have described owe their existence in part to funds made available through the provisions of the Vocational Education Act.

Vocational education for the public service is in desperate need of pioneer work. The Public Service Institute of the Loop College has made a preliminary step in this direction. The job ahead, however, calls for an increase in financial assistance for planning and developing programs.

The proposed Vocational Education Improvement Act of 1967 should bring about desirable changes in the field of vocational education by strengthening aspects of the program in which weaknesses have become evident.

The encouragement of innovative and exemplary programs in my estimation, should stimulate the planning and developing of new and more meaningful programs.

The work-study provisions of the bill may have great potential for effective vocational education. Care must be taken, however, to arrive at clear understandings between educational institutions and agencies providing work situations concerning responsibility for the supervision of the work-study operation.

The emphasis on training of teachers and administrative personnel for programs of vocational education, as well as the inclusion of vocational guidance and counseling under the definition of "vocational education," will improve the program, especially if our concern is with better quality education.

I have prepared this statement. I would like to summarize it briefly. First of all the reason, I guess, for appearing here is that in a sense government has been an employer that provides job opportunities. This is the area in which the Chicago City College, especially the Loop Campus has been doing some pioneer work in the past year. And as the trends of employment indicate, the number of people that will be needed for State and local government will increase by about two-thirds of the present number by 1975. As you stated this morning, Congressman Pucinski, our society is entering the postindustrial era, the year of services, and most of these services are and will be performed by the State and local government.

As a 2-year institution, at Loop College we are concerned mainly with the opportunities for high school graduates at the middle level of civil service, and we are also concerned with people who are presently working in the government, especially State and local government, who need additional skills and are anxious to do something to improve their condition.

I am glad to see that in your bill you include counseling services under vocational education. In my limited experience with this program I think we can assure you that this is a badly needed aspect of any enterprise dealing with vocational education. Very often you find an individual working for a government agency who says that he would like to improve himself, but he doesn't know how. It is a desire that must be translated into practical terms. I think this is where counseling comes in.

There is another provision that is full of great possibility: the work-study idea. This calls for closer cooperation between the college and various government agencies. This is the way in which we hope to develop our programs closer with the agencies, all groups of agencies.

I have described briefly in my statement a program that we are developing in law enforcement. I think it will be a model program throughout the country because it shows the kind of cooperation that can go on between the college, the Civil Service Commission, and the police department. There are specific jobs that each one of these institutions has to do. The problem is to maintain each one within the confines of its competence.

Ultimately, I want to say that in a sense, the private sector shows something to the public sector that is very important. The kind of structuring of jobs. I think it has been repeated over and over today that not everyone can get a master's degree or a Ph. D. In a sense there are various opportunities below these levels that need some structure, that need some rethinking, that need recognition, and this is where I think the community college can do a great service, in formalizing training and preparation for opportunities at the middle range.

Mr. **Pucinski.** That's right. Very good, Doctor. I am particularly impressed with your strong support of the counseling provision, and I think that you at the college level can probably appreciate this a good deal more. But I think there was some suggestion made here today that perhaps you would like to comment on. That we ought to start this counseling a good deal earlier than we are starting it. Do you have any views on that?

Dr. **Rotella.** Well, it all depends from the quality of counseling. I must say that one of the problems of our society is we do not have enough well-prepared counselors. It is a new profession. Teaching is an old profession, medicine is an old profession, counseling is a new profession, and realistic counseling is a necessity. Let's face it. At one time it used to be done by the teacher in the lower levels, but the teacher had a limited number of students to deal with. But now the classes are getting larger, and the society is getting more and more complex. Many times the teacher does not know the opportunities that exist, and this is where counseling comes in. The sooner, the better to try to make the individual more realistic in terms of opportunities, and to guide them toward job opportunities. So at the earlier levels there would be a kind of vocational guidance as in terms of general orientation as related to the individual's potentiality; later on, at our level, counseling could become more vocationally oriented. I think our institutions of learning should know more about the outside world, they should keep in touch with the outside world. Otherwise the institution of learning is an ivory tower which sooner or later will become useless to society.

Mr. **Pucinski.** Now, what are the colleges doing for the city—what are they doing to fill the gap in providing counselors and providing teachers in this field? Do you have any special problems in this?

Dr. **Rotella.** No. First of all, I don't think I am qualified to answer that question. I am particularly interested in, and I have been working with the public service agencies on this. So this is one area where we desperately need help. Our college is a 2-year institution. We do not have programs preparing counselors. This is a function for the graduate schools.

Mr. **Pucinski.** What would be your reaction to the suggestion made by Mr. Desmond that we drop the academic requirement in lieu of good, hard, solid experience for vocational-training teachers in some of the fields where really it is the experience that is most urgently needed in terms of being a good instructor?

Dr. **Rotella.** I think it's a very sensible statement. I think this is something we will have to do anyway in many vocational areas. You won't have the people who have the academic qualifications. Of course, the difficulty there is to make sure the training or whatever experience the individual had is sound.

In a sense, the formal degree requirement has shown one thing, the individual has gone to a recognized program and given institution; but I would say especially at the college level this is a problem that we will have to face to bring individuals, especially in vocational education, who have recognized experience rather than degrees. I think this is a necessity to just be realistic about the number of people we have to train.

Mr. **Hawkins**. I wish to commend you for a very excellent statement. I notice that on page 7 of your statement you made a suggestion about the work-study provisions of the bill, a problem that might arise due to a misunderstanding between the agency which is providing the work situation and the educational institution. Do you have any suggestion how this bill may be amended in order to provide a clear understanding, or are you suggesting that the bill be extended?

Dr. **Rotella**. Let me say that I have encountered this problem in trying to develop programs with city agencies. Who has the responsibility for supervision? I don't think there will be one solution to the problem as there is no one specific way of establishing work-study programs. It seems to me that if we are aware of this difficulty, and if we spell out an agreement between the institution of learning and the Public Service Agency, then I think we have solved the problem. It's something that I think responsible people will have to keep in mind.

Mr. **Hawkins**. Then it can be handled administratively?

Dr. **Rotella**. That's right, yes.

Mr. **Pucinski**. Doctor, we are grateful to you for spending so much of your time with us today, and I apologize to you for the lateness of the hour. You have brought us some extremely important information on this bill, and it's my hope that we are going to be able to build a further bridge and increase the close cooperation between our city colleges and junior colleges, and it was, I am sure, just as interesting to you as to the rest of us the large number of youngsters that are in vocational education that would want to go on to some form of higher learning. I think the city college does offer a tremendous opportunity for that youngster so your testimony just dramatizes the enormity and the complexity of the problem. But we are hoping we will get there. We want to thank you very much for your contribution today.

Now we are going to adjourn today, and the subcommittee will resume deliberations tomorrow in South Bend, Ind. But before we leave here I would like to thank Major Lower, Mr. McMasters, and Mr. Peterson and all the other gentlemen here at the Science Museum for making available to us this excellent facility for today's hearings. We are grateful that we could be here in Chicago and I am proud that we have in this city the Museum of Science and Industry, and I think any person who has anything to do with this unique and unusual institution can be proud of the job we are doing here. And the exhibits we saw today certainly have helped us understand the validity of our position in trying to enhance or provide additional funds and resources for vocational education in America. So we are tremendously grateful to the management of the Science Museum for making our day here complete. Thank you very much. The meeting will stand adjourned.

(The following statement was submitted for the record:)

STATEMENT OF SAMUEL C. BERNSTEIN, EMPLOYMENT SECURITY ADMINISTRATOR, ILLINOIS DEPARTMENT OF LABOR, BUREAU OF EMPLOYMENT SECURITY

I want to take this opportunity to express my support of H.R. 8525 amending the Vocational Education Act of 1963. The amendments, providing for additional financial resources, are in my opinion, necessary if we are to fully implement the Vocational Education Act. With this additional funding we can look forward, with much greater assurance, to being able to equip our youth with skills which will make it impossible for them to become economically self-sufficient and socially useful.

As the Employment Security Administrator of the Bureau of Employment Security in the Illinois Department of Labor, I am deeply involved in the problems of the several thousand of unemployed youth in our State—most of them dropouts, but too many who are high school graduates—with no saleable employment skill. Ours is an expanding economy, marked by rapid changes requiring increasingly sophisticated technological skills. On the one hand, jobs for the unskilled are on the decrease while on the other hand we are faced with growing skill shortages. A recent study conducted by the U.S. Department of Labor's Bureau of Labor Statistics pointed out clearly the plight of those youth who are not equipped to compete in today's world of work. The study pointed out, for example, that 36% of the Negro youth who were listed as *not* being in the labor force (i.e. not seeking work and not in school) had never held a full time or part time job. This was true of 23% also of the white youth in this category. In other words, for both a large number of Negro and white youth the opportunities to obtain early work experience which would make them more employable in their adult years is extremely limited. How different would the story be if they had had the opportunity to develop vocational skills and employment orientation in high school.

It has been estimated that by 1980 we will have some 16 million college graduates among an adult population of 123 million. The work of the country in the next generation will fall upon 85% of the population who will need to obtain work skills either through our secondary school system or through work experience. How far will our vocational programs go toward providing this bridge between school and work based on our present resources? In Fiscal Year 1964 approximately 19.2% of our high school youth participated in some kind of federally aided programs involving vocational education. By Fiscal Year 1965 there was a significant increase of 5% sparked by the resources made available through the Vocational Education Act of 1963. The projections for 1970 anticipate that this enrollment will rise to 35%—but this figure is far short of the need.

Our problems in vocational education are not limited to the lack of vocational educational facilities. Equally important is the quality of training, its timeliness, the skills of the teachers, the techniques and the ability to reach out into the more remote communities to provide opportunities for our rural youth. Important, too, is the need to tie the school's vocational education programs more closely to industry, government and business. Illinois' problems in these areas are typical of those facing most of the states in the nation. In January, 1963 the Governor of Illinois released an exhaustive study (prepared by experts from industry, government and education) which was concerned with the problems of alleviating unemployment. In this report it was clearly pointed out that long range planning in education and vocational education was basic if unemployment in the State was to be eliminated. While the report was concerned with immediate measures including the training and retraining of unemployed youth and adults under the Manpower Development and Training Act, it made very decisive recommedations for expanding and updating the vocational education structure. The recommendations have been implemented in part but they will require the full financial supports which are envisioned in the amendments to H.R. 8525 if we are to look forward to meeting the problem head-on.

One of the problems mentioned in the Governor's Report could be alleviated with the passage of the amendment making funds available for Residential Training Schools. In Illinois for example, we found that in 1960 half of the counties had *no* programs in trade and vocational subjects. Only 15 high schools had sufficient full time enrollment in trade and industrial education to support four or more full day programs. Only 21 school districts had as many as 100 students enrolled in combined full day, apprentice and trade extension programs. An adequate program of vocational education is impossible with such small units. The answer obviously is an area school or a residential school where great travel distance would make it difficult to commute daily. The advantages and the economies of establishing residential schools were ably covered in recent Hearings before the Subcommittee of the Senate Committee on Appropriations.[1] I can only add my full concurrence with that testimony.

The proposed amendments would provide funds to expand the cooperative work study programs in vocational schools. The advantages of such programs are many. Not only do such programs permit the economically disadvantaged student to "earn while he learns" but they provide a most meaningful adjunct to the vocational training in the classroom. Many of those who participate in such programs are given the opportunity for the first time of learning about and exploring the world of work and its many ramifications and opportunities. They are exposed not only to many different jobs but learn at first-hand what work means and what the responsibilities of a worker involve. By bringing together the school learning experience and the career objective, I envision a marked drop in the number of students who leave school before completion because such a program should stimulate a high degree of motivation so essential to the retention of our youth in school. As was pointed out in earlier testimony on this subject, such programs are relatively inexpensive. Estimates are that costs run about $294 per student yet the ultimate returns in terms of employability of the graduates can be multiplied a hundredfold. We have had some experience with programs such as this in Illinois. The Carson Pirie Scott program is known nationwide. The programs conducted with other companies by the Chicago Board of Education are receiving national recognition. This is an area which deserves the full support of this committee.

The proposed amendments to section 201 of the George-Barden Act deal with a very pressing skill shortage of licensed practical nurses. I cannot overemphasize the need for increasing funds for such training. The Illinois Bureau of Employment Security is deeply involved in the training of unemployed workers under the Manpower Development and Training Act. One of our most successful programs has been the training of Licensed Practical Nurses. In spite of the fact that we have committed a significant portion of our funds for training in this area we are far short of meeting the needs in this critical occupation. The need will increase rather than decrease in the near future as we provide expanded medical facilities and begin to staff up nursing homes under Medicare. It is absolutely essential that vocational education funds for training of practical nurses be increased. It is an obvious area for training under vocational education. We would like to see an expansion of this program in the public schools to permit the enrollment of in-school youth as well as out-of-school adults who do not qualify for training under MDTA but who have the potential and interest to become practical nurses.

Those of us who have been actively involved in the Manpower Development and Training programs these last few years have learned much about the unemployed. We have learned that for many the problem has been one of minimal skills and work experience. For some the problems are more basic and not so readily identified, but for the youth particularly, a meaningful vocational program in the high schools would have proved the "know-how" for entry in employment and for continued upward mobility. With adequate financing of vocational education in programs designed to keep youth in school until they develop a saleable skill, we may look forward, eventually, to the day when non-college bound youth receive the preparation needed for the world of work.

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[1] Statement of Wayne W. Miller, Oklahoma State Tech., Okmulgee, Oklahoma; page 2515, Hearings Before the Subcommittee of the Committee on Appropriations, U.S. Senate 3/30/66 through 6/3/66.

VOCATIONAL EDUCATION IMPROVEMENT ACT AMENDMENTS OF 1967

SATURDAY, APRIL 29, 1967

General Subcommittee on Education,
House Committee on Education and Labor,
South Bend, Ind.

The subcommittee met at 9:30 a.m., at the Cline School, South Bend, Ind., Hon. John Brademas presiding.

Present: Roman C. Pucinski.

Mr. **Brademas.** The General Education Subcommittee of the Committee on Education and Labor of the House of Representatives is meeting today in South Bend for hearings on proposed amendments to the Vocational Education Act. I am especially pleased to welcome to South Bend my very close friend and distinguished colleague, Roman C. Pucinski, chairman of the subcommittee, who is serving with great ability and dedication in a position of great importance to American education.

I would like, if I may, to say a word about our proceedings here this morning, and then a word about the nature of the legislation. After that, I will call upon our first witness. What I propose is that our first witnesses, Mr. James Maurer, Mr. John Wagner and Mr. Jesse L. Dickinson, come forward in a moment and give us their testimony; then we'll question them. Mr. Nicolini will follow them. Then we will have Dr. Holt, Dr. Ruff, and Mr. Wysong. This afternoon we have scheduled Mr. Lawshe, Mrs. Sells, and Mr. Hadley. We will conclude our testimony with Mr. Beaudway, Mr. A. K. Smith, and Mr. Eli Miller. We can, of course, vary the schedule if it becomes necessary.

Fifty years ago, on February 23, 1917, President Woodrow Wilson signed into law the first bill providing Federal aid to vocational schools. The Smith-Hughes Act was then followed by a wide series of acts amending the vocational education program. Most recently Congress passed the Vocational Education Act of 1963, and this year we are considering new legislation.

In the Vocational Education Act of 1963, which Congressman Pucinski and I helped write, we expanded the program of Federal support for vocational education for the occupations of an agricultural society to allow training for the occupations of an urban society, as well. Now, with this new measure, we must consider a further shift, for the changing character of the American economy and the resulting shift in manpower needs require that our schools anticipate now the demands which will be made of their students in the future.

It is estimated that within the next few years employment opportunities in the professional, semiprofessional, and technical fields will increase more than 49 percent, while job opportunities for unskilled workers and agricultural workers will actually decline.

At the same time, more than 1 million students drop out of school each year. Many of these students will not receive the education or training which will prepare them to adapt to the jobs available to them 10 to 20 years from now. If they are to develop to their greatest potential as wage earners and as citizens, school programs must be designed to keep them in school, and these programs must prepare them to function in an increasingly complex society.

Our hearings are today directed to two bills which touch on this problem, two bills on vocational education which I have introduced with Congressman Pucinski. H.R. 8456 contains the vocational education amendments recommended this year by the administration, and H.R. 8671 which combines the administration proposals with those contained in the vocational education measure reported out by the General Education Subcommittee last year.

The major administration proposal to be discussed at the hearings calls for an authorization of 30 million dollars for fiscal year 1968 to encourage innovative programs in vocational education.

Mr. Pucinski and our subcommittee have decided to conduct hearings on proposed vocational education bills in a number of cities in the United States so that we may obtain the counsel of leaders in business, labor, education, and civic affairs in several parts of the country on the proposed measures. We are in South Bend, Ind., as a city with a strong school system marked by outstanding leadership in education, business, and labor. We are an industrial city, which has in recent years experienced economic difficulties and has used education to help overcome these difficulties.

It is fitting, I think, that we should be meeting in the Cline School because following the shutdown of the Studebaker plant some years ago, we greatly intensified the number and kinds of education under the Manpower Development and Training Act, and President Johnson and the then Commissioner of Education Francis Keppel both visited the Cline School to see our manpower training program in operation here.

The final point I would like to make while we are here in South Bend is that it is a community which has undertaken to move ahead into the field of area vocational education by means of building an area vocational school and is doing so with the strong support of local education, business, and labor leadership. Before I call upon our first witness, I'd like to call on Mr. Pucinski.

Mr. PUCINSKI. Mr. Chairman, I am delighted to be here this morning in South Bend, in the district of Mr. Brademas who is today recognized in the Congress of the United States as one of the truly impressive authorities on education in this country. John is one of the most highly respected members of our committee. He has played a key role in the development of major legislation since the great revolution occurred in Congress. Congress then recognized that local communities cannot meet the challenge of the mid-twentieth century on educational needs alone. It is rather significant that the big change that occurred in America's whole posture toward education occurred early in 1959.

When Mr. Brademas and myself; Congressman Giaimo from Connecticut, Congressman Daniels from New Jersey, and Congressman

O'Hara came to Congress in 1959, the five of us were assigned to the House Committee on Education and Labor. Previous to that, this committee had frustrated every single effort in this country to deal realistically with the problem of education. In 1959, in the 86th Congress, the ratio of the committee was changed, and with the addition of these five members led by Mr. Brademas, the Congressman in whose district we are today, we were able to change the entire posture of the committee, so that we went from $400 million in Federal aid in 1959 to $13½ billion of Federal aid to education in 1967.

As we look upon the various programs we have in this country, higher education, manpower retraining, vocational education, elementary and secondary education, the aid to the handicapped, including retarded youngsters, we see an appearance emerging which has helped this country and the local communities of America meet a great challenge.

I don't know if the people of this district realize the tremendous contribution that Mr. Brademas has made to education. I'm very happy to be here today. I am delighted to make this point. The legislation before us I consider among the most important legislation before the 90th Congress.

In the State of Indiana alone since the Vocational Education Act was adopted in 1963 with the help of your Congressman—I remember well Mr. Brademas was in the forefront in drafting this legislation—significant programs have been made. Prior to that the role of the Federal Government in vocational education was primarily of a very limited nature, limited primarily to rural areas. It was the strong influence of men like Mr. Brademas who saw the industrial development of South Bend, and some of the other areas of the State of Indiana, which needed a tremendous amount of assistance to develop the skilled help this country needs to meet the great challenge of our country.

For indiana, I had the staff draw up some figures for us which indicate that the total expenditures for vocational education and training, Federal, State, and local for the fiscal year 1966, was $16 million. Federal grants to vocational education, and this is where I think the real contribution that the gentleman from Indiana, Mr. Brademas, has made is reflected in these figures; for fiscal year 1966, Federal grants for vocational education total $6,183,000. The estimated for fiscal 1967 is $6,788,000. And the legislation for which Mr. Brademas is sponsoring in 1969, the estimated Federal grants will be well over $12 million. Federal grants under Vocational Education Act of 1963 alone for 1966 total $3.9 million, and for fiscal 1967 $4.9 million. Federal grants for construction, addition, and renovation for fiscal 1965 and 1966 have totaled $5 million in this State alone. The number of schools receiving Federal funds in Indiana in fiscal 1966 are 300 schools. Under this legislation the number of teachers in vocational education for 1966 is 2,255. The enrollment in vocational education and training in fiscal 1966, the total of enrollment in this State is 78,507. It is interesting to break this down to agriculture, 17,852; distribution, 2,465; health, 934; home economics, 39,603; office, 205; technicians, 3,600; trades and industries, 13,794. The number of youngsters getting help had increased after the act in 1963, so I consider this legislation tremendously important; and I am particularly happy to be here in South Bend which we have recognized all over the country as one of the best industrial centers of America.

A lot of innovative ideas have flowed from this community. It's rather fitting to me that you should have a congressman who so deeply and profoundly understands the educational needs of this community. Working together, we see tremendous growth. Driving down, I went by St. Mary's College. There is a new, huge addition being built with funds from the Higher Education Facilities Act. All of these things indicate one thing: We are moving to meet the challenge.

By 1970, which is only 30 months from now, there is going to be 9 million youngsters in this country taking vocational training in public high schools. In other words, 1 out of every 2 youngsters in this country is going to be involved in some form of vocational education by 1970. I am hopeful that this legislation will receive sympathetic consideration in Congress, because even the modest proposals included in this bill, which combines the administration's proposals, doesn't begin to meet the needs of the 1970's.

I said in Chicago yesterday, that this country is faced with the most serious problem of losing its position of industrial dominance in the world. With nations like Germany and France and Italy, the Scandinavian countries, England and Ireland, Japan, all of which countries are seeing a relative period of peace—relative I say—hopefully the Vietnam conflict is going to be resolved reasonably soon—with expectation of a long era of peace in this world, these countries are now developing huge industrial potential. Unless America moves in the direction of the legislation sponsored by Mr. Brademas, unless this country moves in that direction, we could find ourselves by 1970 faced with a critical shortage of skilled help, skilled technical help to meet the industrial needs of this country, and we could slip into a secondary role. Now, I am hopeful this will not happen. I am confident it will not happen as long as we have and act favorably on the kind of legislation that we have before us today.

We are very happy to be here, because it's important for us to get the viewpoints of people at the level where they live with the problems of vocational legislation. We hope that during this hearing you are going to tell us the weak points and strong points of vocational education. Too often in Washington we only hear the good. It's important for us to come out here and hear about the problems that you are confronted with day to day. So that we as legislators can then try to correct these problems.

To that extent, Mr. Brademas, I am delighted to be here. I would like to give a footnote. Many people don't know this, but in my younger years, I spent the summers on a farm in Westville, and LaPorte, Indiana, so I consider that I've got a little Hoosier blood in me, too. Maybe that's why we work so well together in Congress. I'm happy to be here. I'm anxious to hear the testimony.

Mr. **Brademas**. Thank you, Roman. I appreciate that very much. Our first witness is Mr. James Maurer who is the vocational educational coordinator from the Plymouth High School. Mr. Maurer, why don't you just go ahead and make your statement, and then we'll hear from Mr. Wagner, Mr. Dickinson, and question all three of you.

STATEMENT OF JAMES MAURER, VOCATIONAL COORDINATOR, PLYMOUTH HIGH SCHOOL

Mr. MAURER. Because of the continued cross-referencing, back-stepping, and legal terminology employed I find it difficult at times to grasp the full intended meanings and purposes of proposed amendments to existing acts. With this in mind, my comments concerning these two bills will be brief.

The Vocational Education Act of 1963 has enabled the several States and territories to make significant steps forward in the improvement and expansion of vocational education. Much remains to be done and the increased appropriation authorization would certainly be helpful.

The section dealing with exemplary and innovative programs should be quite helpful in all areas, but especially helpful in those areas where there is a concentration of young persons who are untrained and/or uninterested in improving themselves educationally, socially, or financially. I feel that this bill, when enacted, would do much to help young people to achieve satisfactory adjustment to self-sufficiency and what we commonly refer to as "The American Way of Life."

The work-study program section of the bill is in line with the other provisions; the alteration in matching of funds requirements should make it possible for the more economically deprived areas to take better advantage of this worthwhile opportunity.

Residential vocational-education schools have experienced some problems and received much criticism. There are several reasons for this, but most reflect the type of students served by these programs—the school dropout. Basically, the residential school program is very good. I happen to believe that the process of education should develop every individual to his maximum capacity—provided that, and as long as, he is willing to work toward that goal. Perhaps some of these dropouts have not been sufficiently motivated toward learning a salable skill. I am sure that the appropriations authorized by this bill would keep many people off the public support roles because they received training in an occupation where there is a shortage of qualified employees.

The final section, pertaining to vocational-education teacher training, is a "must" and should have been included in the 1963 act. There is a critical shortage of qualified personnel now. We cannot possibly meet the needs of the next few years without the enactment of this measure.

I think probably I should tell you something about what I believe concerning vocational education. My theory or pet definition is that vocational education or education in general should develop every individual to his maximum capacity provided that, and so long as, he is willing to work honestly, sincerely toward that goal. It does take a willingness. He does need to work hard at it. If it is something that we are forcing him into, he is not interested in, then it ceases to be valuable to him.

Secondly, vocational education needs to be a continuous process for every individual in our rapidly advancing technological world. It is impossible to train today for the skills which will be needed in the world 10 or even maybe 5 years from now.

Vocational education needs constant updating, retraining needs to be planned for and provisions need to be made so that this is possible. It is, in my opinion, high time that we in education from the low-level right on up to the top, stop arguing amongst ourselves as to who is going to get the few pennies to spend and begin to consider the needs of our people, and decide what needs to be done and how best to do it, and then go ahead with it this way. Vocational education must be a cooperative effort between all levels of education.

The training must be done when and where the individual—and I stress individual—where the individual can most profit from this training. Whether this be at the high school level, the post-high-school level, the junior college, area vocational education school, technological institutes, or whatever; we do need to make some provision, and I think an improved provision for this type of training.

It is my opinion that we have made an attempt to get started as far as Federal aid is concerned. There is much to be done, and I am convinced that this bill is essential, a must toward improving our vocational education especially in the State of Indiana. Thank you.

Mr. BRADEMAS. Thank you very much. We'll next call on Mr. John Wagner who is president of the Dutron Corp. and is secretary of the board of trustees of the South Bend Community Schools. Mr. Maurer is also a member of the board of trustees of St. Joseph Regional Technical Institute and the Indiana Vocational Technical College of South Bend.

STATEMENT OF JOHN C. WAGNER, PRESIDENT, DUTRON CORP.

Mr. WAGNER. The first sentence of the statement is the amendments as proposed to the above mentioned bills, in my opinion, are a definite improvement to the original legislation.

There is little doubt that resident vocational training centers would enable a much larger segment of our young people to attend school than if they were not provided housing facilities. The availability of housing facilities would not in any way preclude the fact that many students would be able to attend the vocational school and still reside at home. The need for expanded vocational training is very evident by the inability of industry to obtain qualified personnel for innumerable semiskilled and skilled jobs.

The development of vocational schools cannot be accomplished by funding alone, whether it be State-Federal or Federal only. To develop the comprehensive program that is invested by the original act and proposed amendments will require a very substantial number of properly trained guidance counselors in both the junior high and senior high level. Unfortunately, at the present time, there is a shortage of properly trained people in this area. The same situation exists regarding instructors in vocational and industrial areas. The need for properly trained instructors was most apparent in trying to obtain personnel for the manpower retraining program where it became necessary to use technically capable people without teaching training to act as teachers in the program.

A realistic approach to the vocational program should first direct its funds to the training of qualified guidance counselors and instructors.

The appropriation mentioned in the amended bills should be increased substantially to provide an incentive and an opportunity for persons knowledgeable in a given vocation to obtain instruction in teaching techniques. This, no doubt, would require a reevaluation of teaching certification by various State boards for persons engaged in vocational school instruction. Definite steps should be taken to provide certification of vocational teachers and vocational schools to establish an acceptable status for both.

At the present time industry is spending considerable amounts of money on training programs in their respective fields. Their pattern of operation should provide helpful guidelines for the establishment of public-supported vocational programs. There are at the present time many private training schools throughout the country where various skills are taught by qualified people, particularly in urban areas. It would appear to be practical to incorporate in the amended bills provisions to allow maximum use of presently established schools to aid in the immediate training of interested young people.

One of the most glaring obvious needs in vocational training, from industry's standpoint, is that frequently programs that have been available do not provide the type of training needed by industry within a given geographical area. Frequently training programs are offered in sophisticated areas where actually the need is limited. Vocational programs should be established in skills required by industry within the geographical area in which its training program could be instituted that would provide for accurate information of the actual need of industry by type. One of the reasons that this may have been true in the past is the fact that academically oriented people have been involved in the establishment of these programs rather than qualified people dealing with actual industry's requirements.

As far as the vocation legislation is concerned, I am most enthused about it. I think it's a need that has been apparent for a long time. However, there are a few points that I would like to make concerning the legislation.

That is, No. 1: I think the most important fact as far as that is involved in this program is a lack of sufficient number of well-trained instructors in the vocational areas. I believe that the first and foremost project that could be sponsored by Congress would be a program in which an adequate number of properly trained instructors could be provided, whether it be by fellowships or what, I do not know. But I feel this is the most important.

One of the other factors, I think that in some manner the accrued addition of vocational schools should be established in a manner that would give them a status that they should have so that people don't feel that vocational schools—what they have been so often called or typed in the past—that is the person who is at a vocational field academically could go just as a means of being some place. I think this is important. I think there should be, if possible, instituted in the United States a certification of vocational teachers in a different way than certification of academic teachers. I think this would make the whole program better off, more meaningful both to the instructors and to the students.

The other one: I think there should be something to assure the geographical area served by the schools that this would be carrying on programs that would meet the needs of the city. I think there have been cases where the programs have been established academically oriented that have not been in complete accord with the need of the city. I think this is important because if we do not supply types and kinds the worker needs there will be little advantage. I think we have denied system to be concerned about the sophisticated type of programs rather than the realistic type of workers that should be developed. I certainly hope that you gentlemen are able to put this through and add to it. I do believe the most singular important factor in this whole program is first to be sure that we can develop adequately trained instructors, because without that this school cannot be.

Mr. **Brademas**. Our third witness is Jesse L. Dickinson who is the executive director of the Housing Authority of the City of South Bend. Mr. Dickinson.

STATEMENT OF JESSE L. DICKINSON, EXECUTIVE DIRECTOR, HOUSING AUTHORITY, CITY OF SOUTH BEND

Mr. **Dickinson**. I am particularly pleased to be involved in this proposition today and as it seems I will be later, because the government saw fit to appoint me to a situation that I'm really not certain that I'm qualified for. Even if the qualifications may be low now you can rest assured they will improve as time goes along. I have a high degree of enthusiasm for this proposed expansion because I had an opportunity to see how it works. As you know, I am involved in a program with an agency wherein the recipients are people of a level who well profit by this proposition. I have a number of cases but I am thinking of one young man with a family of seven who was just a common ordinary laborer. When he did work he could hardly earn enough money to support his family. He took a course, the manpower training course to be an auto mechanic, and he is no longer with us. He now has his own home. He is the private market, and of course, this makes me more aware of the testimony. My statement is going to be a very short statement, and if it's okay, I will just read it.

Gentlemen of the Subcommittee.

Pope Leo XIII in the *Encyclical on Condition of Labor* dated May 15, 1891 said, "Among the purposes of a society should be to try to arrange for a continuous supply of work at all times and seasons", and we would add a continuous supply of workers. This proposition is as valid today as it was in 1891.

Technocracy seems to be taking care of increasing the supply of work and the propositions in H.R. 8671, if well administered, will enhance and contribute much toward the supply of workers.

During the period when it became evident that automation was here to stay and that technocracy would have an impact on our society, possibly as great as that of the Industrial Revolution, I was among those who were fearful. Frightened because I thought the continuous work proposition of Pope Leo XIII would be dead. But now, of course, it is evident that the fear was not well grounded.

What has come are the opportunities and demands for new careers and the imperativeness for a work force to take up the slack in old careers.

This brings me to a focus on a perhaps small but highly important segment of the bill. I refer to page 4, lines 14 to 25 and page 5, lines 1-9, in particular, line 19 of page 4; "projects designed to broaden occupation aspirations." To me, this means projects to generate motivation.

Among the symptoms of the groups relegated to the lower rungs on the socioeconomic ladder are low aspiration, poor education and unemployment. These conditions are particularly applicable to a big majority of the Americans of my group. All of us know the facts, the history, and the distress in our country emanating from the cruel facets of discrimination and prejudice. I rather suspect that the framers of the vocational-education program had in mind that the evils of these conditions could be remedied and considerably alleviated by the establishment of the schools.

I could develop a long presentation of the effects of this American dilemma on our total society, but this is unnecessary. I will only say that, if racial discrimination were totally abolished tomorrow, the impoverished economic and social resources and the somewhat ingrown psychological reactions of a majority of Negro Americans would act to maintain racial disparities.

Programs by business and industry to recruit Negro Americans, in some cases, have not been as successful as was hoped in the beginning because, by and large, Negro Americans have not been conditioned and/or motivated to the extent of being able to take advantage of, or profit by, the opportunities afforded, be they abundant or meager.

This is why line 19 of page 4 is such an important factor in the bill. It will allow "projects designed to broaden occupational aspirations." This phase is vital to many in all groups whose horizons and levels can be raised through the program, but it is of extreme importance and relevance to that portion of our population classed as Negroid.

This proposed legislation that attempts to expand the vocational program is of tremendous value in getting people prepared and into jobs that are waiting—it is of much value to the total economy—not a dime should be chopped from it because, as they say in the Indiana Legislature, this is a good bill and it should pass.

Mr. BRADEMAS. Thank you very much, Mr. Dickinson. I am going to call on Mr. Pucinski to put any questions he wishes to put to any three of you witnesses who have just spoken.

Mr. PUCINSKI. Mr. Chairman, I want to congratulate all three witnesses for their excellent statements. I want to congratulate particularly Mr. Dickinson in his statement on page 2, in which he said that if racial discrimination were totally abolished tomorrow, the impoverished economic and social resources and the somewhat ingrown psychological reactions of a majority of Negro-Americans would act to maintain racial disparities. I think that this is one of the most significant statements made before our hearing, and it really zeros in on the heart of this legislation. There is no question in my mind that we have come a long way in this country in recent years in bringing down many of the discriminatory tactics that existed. That FEPC, and—I might say that Mr. Brademas was again one of the key movers in getting this legislation put on the agenda—has come a long way to creating opportunities. But the important thing, as Mr. Dickinson points out, is that tragically many of these young people never even get to an interview for a job, because they've had no experience, no preparation. And the expansion of the work-study program in this bill would give these youngsters a key to that first step.

Many youngsters can't even pass the personnel manager. It's a cruel fact of life that in this country—the richest country in the world—that we are the only country in this world that has such a high rate of unemployed among young people. No other country in the world has this dilemma, and one of the reasons, I believe, Mr. Dickinson, is the very thing that you said; that these young people just are shut up, closed out. The young dropout who, as a witness said in Chicago yesterday, the bus just doesn't stop at his corner. The whole world just passes him by. I am grateful to you for this statement.

Mr. Wagner made a very significant statement that we've got to upgrade the status of these vocational institutions. You are right. In this community I'm sure there are many wonderful immigrants come here from the old country. They've worked at skills and trade, and they feel that they want something better for their children. So they look at vocational education as something of a secondary nature. I think that we ought to point that out. I am grateful to Mr. Wagner for his testimony.

I had ten students testifying in Chicago yesterday from ten different vocational schools. I was amazed to find one thing. Seven of those students were going on to college. Most persons did not realize that the modern vocational institution has become as much of a college preparatory institution as some of our best high schools in this country. And these young men and young women were going on to the various professions, many of them were going into engineering. They felt that they bettered themselves and better prepared themselves to go on to engineering by attending a vocational education school instead of just a normal one. So this is very true.

I want to ask a question of Mr. Maurer, because you talked about the work-study program and talked about the residential centers. We are going to have a problem in Washington, and it's not a problem that is unique to us, with the Bureau of the Budget. We're already in that position. As you know, the administration has proposed a very simple little addition of $30 million for demonstration projects and innovative ideas in education, which you said in your statement is very good. But we feel—at least I feel very strongly—that that is nowhere near enough to meet the challenge. And I want to ask you, Mr. Maurer, whether you feel that we ought to just move ahead and stay with the provisions in the expanded bill introduced by Mr. Brademas, one of the members of the Committee, hold the line, and insist on these amounts to beef up the work-study program which you speak of with considerable emphasis, with the additional provision to training more teachers. In this revised combined bill we provide additional funds for training teachers in vocational education. What is your judgment? Now, should we press forward for all the provisions of this bill, or should we give in and settle for the crumbs?

Mr. Brademas. Now, of course, Mr. Maurer, that's not a rhetorical question. We don't ask questions like that on this Committee.

Mr. Maurer. We have heard it said that anything is better than nothing, but I believe that a token-type of thing, when we could get something better should perhaps be considered. As in the prepared statement, I indicated that the section pertaining to the vocational education teacher program is a must and should have been included in the 1963 Act. Therefore, I would be in support of the combined bill.

Today, there is very critical shortage of qualified personnel in the form of technical training people both of the skill and the technical trades. We cannot possibly meet the needs of the next few years without a considerable amount of help along these lines. I'm not sure exactly how they should be handled, or where it should be handled, but we must do something and the sooner the better.

Mr. Pucinski. I am wondering if Mr. Dickinson would care to comment on that question. I'm mindful that perhaps it's not the fairest question in the world, but when we get to the floor of the House with this legislation, we like to be able to cite not what the people in Washington say, but the people along the line say. You have to work with the results of these bills, live with shortages. It's important to know what your thinking is.

Mr. Dickinson. I feel certainly the fight is justified, because to me this is the bare minimum. Maybe someone can show where this isn't the case. I think it should be carried on this basis and then, of course, having observed lawmaking bodies you may finally get to the place where you will have to accept less. From where I am sitting and what I observe, the problem that you are attempting to alleviate here, not only—this isn't pertinent only to people who will be directly affected but this is pertinent to the whole economy. I don't know how successful you may be in convincing some of your coworkers on this matter, but certainly I think that not one iota, every bit of vitality, every bit of energy that is available to be expended should be put on getting this total thing. I would be disturbed to see $100 taken from it, but in the final analysis, of course, you will have to take what you can get.

Mr. Pucinski. You will notice that increases in this legislation don't come into effect until 1969. We are, of course, praying and hoping and doing what we can to make sure that Vietnam is just a bad dream behind us by then, so we have funds available then, more than funds available now.

Mr. Dickinson. I think Congress should recognize, many times I observed Congressmen did not spend any amount of money. I think that they should be recognized that from those of us paying the bill, you don't hear too much objection. Once, a long while ago, I didn't earn enough money to pay taxes. I said if I ever get enough money to pay, nobody is going to hear me scream. Nobody has heard me scream. If they listen closely they will hear some moaning. Nevertheless, I am still willing to have that increased for propositions such as this, and I will hope that you will try to impress upon them who are screaming and yelling that those of us who pay the bill are not screaming. I think that is important. If they raise my rate, you know I'm going to yell. If they raise for things of this kind and other programs that are necessary, you know I won't.

There is so many things that goes to get this done. They're going to be federal level. I would pay my part.

Mr. Pucinski. Mr. Wagner, you talk about upgrading the status of vocational education. How effective are your counselors in going out and selling this message. Do you have, for instance, counselors that go out to elementary schools at the seventh and eighth grade level and put on exhibits and try to show youngsters the various opportunities that exist in attending a vocational school. Is there a significant effort made on the part of the various counselors—I am assuming you have them—and by the teachers in the program to redirect the emphasis on the positive aspect of the vocational program?

Mr. Wagner. We have counselors, of course, all through our system, but not enough that are available, and this is a problem that seems most acute to me, the fact that we don't have enough counselors to reach the students who need the greatest motivation.

What happens as far as my own observation, where we interest youngsters in vocational education, it is somewhat motivated that the counselor does the greater amount of work, because the large number of children that each guidance counselor must work with. We need more counselors to help motivate these youngsters who are at a lower level. This is true, I am afraid, where there is a large vocational program. There aren't adequate counselors and directors available to do a better than average job. We won't succeed alone, won't achieve our objectives. I think the most urgent need is to train more people for instructing fields as well as the counseling field so that these people can be reached. This may not be the only problem, but I think without proper improvement in the instructional field with a number of people in that area, we just can't hope to make any good vocational programs succeed.

I don't think—it doesn't seem that is the fact that there isn't enough information available to students on a counseling basis. They just can't cover the whole program.

Mr. Pucinski. This legislation provides, in 1969, 100 fellowships for teachers, vocational-education teachers, and 150 fellowships for administration. Some people feel that we should go the other way. Of course, it provides 100 fellowships for students in the next 4 years and 200 fellowships for administration. There are those who feel we should change the ratio around. The need is greatest for teachers, and some witnesses have suggested that we ought to provide a greater number of fellowships for teachers, and lesser numbers for administrators. Would you subscribe to that?

Mr. Wagner. I don't think that your number of administrators is at all incorrect. I think you should multiply teachers, instructors with that.

Mr. Pucinski. Which do you need more of now?

Mr. Wagner. I would say teachers.

Mr. Pucinski. If we were to reverse it to 150 fellowships for teachers and 100 for administrators and in the succeeding 4 years, 200 teachers, 100 administrators; would you feel that this would strengthen the bill?

Mr. Wagner. From my opinion it would, except I think the numbers are inadequate. They ought to be upped considerably in both areas. I think it is imperative to attempt to up the status or image the institution has for administrators and teachers in it. When you have considerable feeling, then the feeling of vocational education as a general pace of attendance in school would be much more acceptable than it is. Too often we don't actually—I don't know what the ratio should be. I am sure in vocation the number of students per teacher should be lower than it is in academic areas.

Mr. Pucinski. One final thing. You will notice in section 201 of this bill we provide for the Commissioner to enter into contracts with private agencies, organizations, or institutions, when such grants or contracts will make especially significant contribution to attaining the objectives of this subsection. We probably have to strengthen this language because there seems to be some doubt in some witness' minds as to whether or not this really means that we could enter into contracts with a private profitmaking corporation. If indeed your company had some significant programs going that could make contributions toward developing more techniques in vocational education, it is certainly my intention to permit that kind of arrangement. Do you feel that this attitutde would bring the private sectors closer into the whole field of developing new techniques and new methods?

Mr. **Wagner.** I said in my comments, written statement, the fact that I think industry as a whole has done a great deal to develop programs for the development of skilled workers. I think that your legislation could be strengthened by, I think, some of the ideas that industry has already. I think that without question more rapid expansion of the vocational program could be made with the cooperation of industry, rather than trying to do it on an individual establishment of skill. I think this is one of the things that ought to be given a lot of consideration. There are private schools in various vocational areas that should be given an opportunity immediately to take on as many additional students as possible. I think that we should take advantage of all of the areas that are available to us at the present time rather than waiting until such a time as all of these schools must be established. How this would be incorporated would be a judgment.

Mr. **Pucinski.** It's in the bill.

Mr. **Wagner.** But I wasn't able to determine how much.

Mr. **Pucinski.** Perhaps our report ought to spell out some of the thinking, make sure there is no question that we do want to use nonprofit private agencies and also private organizations that are profitmaking if they can make a contribution, if they can help us develop techniques that will improve the whole structure of vocational education. I see no great conflict or objection to bring them into the program. I'm not too concerned over the fact that they may be a profitmaking organization. If they have a contribution to make, what is the difference.

Mr. **Wagner.** My thinking would be that we should use them wherever we can to provide instruction for young people at this time. I thought maybe in your bill, my impression was that you are using developing methods.

Mr. **Pucinski.** That is correct.

Mr. **Wagner.** Rather than the actual application, actual opportunities of going into institutions or private schools of some kind that are for vocational education.

Mr. **Pucinski.** Your suggestion then is that the bill ought to provide a more lasting relationship between industry and the vocational training program?

Mr. **Wagner.** Something that would reflect that would be similar to the G.I. bill of rights in which subsidiary is available to students to want to attend a particular type of school, as immediate opportunities for youngsters to get into these areas which presently are not possible and will not be for some time at least on this program.

Mr. **Pucinski.** Maybe we can work this into the work-study program. This might be. Mr. Chairman, these are excellent statements. I am delighted to have come here to view them.

Mr. BRADEMAS. Thank you. Mr. Pucinski raised to you a number of questions which I had noted, which I think I'm going to put to subsequent witnesses to get their views as compared to yours. I want to thank all three of you very much and I hope you'll have time to stay with us for a while. Next on the witness schedule is Mr. Lewis Nicolini, who is the Director of the Indiana Employment Security Division. I think I am right in saying that, Lew, you are president this year of the Interstate Conference of Employment Security Agencies, am I correct; so you speak with special authority. I am pleased to have you here.

STATEMENT OF LEWIS F. NICOLINI, DIRECTOR, INDIANA EMPLOYMENT SECURITY DIVISION

Mr. NICOLINI. Thank you, Congressman. I will try to make my remarks brief, because I am sure much of what I would like to say has already been said.

I apprecate the opportunity of appearing before you to present my views on the important vocational education measures your subcommittee is studying and on the Vocational Education Act Amendments of 1967, particularly H.R. 8456 and H.R. 8671 introduced by my own Congressman, John Brademas.

If my statement appears brief it is only because I'm aware that during the 89th Congress your General Subcommittee on Education conducted hearings which resulted in almost 1,000 pages of testimony; also, I'm aware that during recent weeks the general education subcommittee has held hearings on various vocational education measures, and therefore, I shall try to limit my remarks to those areas that I feel were not covered during the aforementioned hearings.

More than ever now our young people must receive schooling; they must be prepared to earn their way in tomorrow's world.

Advancing technology in the coming years will require new skills and accentuate the need for prejob training. Numerous workers may be stranded because they will not have the labor skills needed for tomorrow's jobs. Because young people will be forming a larger part of Indiana's population, their future will be tied closely to the demands and opportunities of the changing labor market. I am sure this can be said for our Nation as a whole.

In Indiana we estimate that in 1970 there will be approximately 100,000 youngsters reaching 18 years of age. These young people will compose our future labor force and they are the ones for whom employment must be waiting when they finish their high school studies. These are the people who must have the knowledge and training the labor market will require.

Year by year the demand changes. New occupations are born while others grow obsolete. We predict that employment will continue to grow faster in the service industries than in the factories.

Because improved machinery and methods are increasing individual output, proportionately fewer workers will be needed to produce manufactured goods. As standards of living become higher, people seek more and more services. This desire widens employment opportunities in the service industries.

The changes in tomorrow's occupational demand will result from several major causes: The continuing shift from an agricultural to a predominantly industrial economy; the rapid expansion in research and development activities; the accelerated pace in the application of technological improvements; the growth in size and complexity in business organizations; the increase in paperwork and recordkeeping among all types of enterprises; and, the need for more and more educational and medical service.

Fewer job opportunities will exist among the manual occupations than will in professional, technical, office, and sales occupations. The jobs in tomorrow's manual occupations will call for skilled craftsmen; not unskilled workers. Skilled operators for all types of factory machines will be wanted, tool and die makers will be needed, and training maintenance mechanics should have no employment problems whatsoever.

The demand for individuals trained in skilled and semiskilled occupations in all Indiana industries is expected to be about 17 percent higher in 1970 than in 1960. In manufacturing industries the demand for more skilled craftsmen and operatives is even more pronounced, where an increase of almost 23 percent is anticipated. It is important to consider: Although total demand for labor in factories will not be as great as in service industries, the demand for skilled and semiskilled workers in factories will be almost twice as great as in the nonfactory category. It is crystal clear to us that occupations making up the labor force in 1970 will require more vocational training and new methods in vocational education to accomplish this training.

Technical change will force us to adopt higher standards of instruction at and below the high school level. At all ages those students who do not plan to enter college must be given more realistic educational opportunities. The traditional type of training will simply be inadequate. Experimentations with new ideas, new materials, and new tools must come into existence.

Unless realistic educational opportunities are provided in the form of better vocational training, we will face increasing problems caused by high school dropouts. Many young people, realistically appraising the ordinary academic high school as not meeting their needs, are reluctant to enroll in vocational schools because of the stigma attached. And this stigma is real because in the past and, regretfully so, even today vocational training units or facilities are used as dumping grounds for the so-called marginal and submarginal student. In reality, the depreciating term applied to such students by educators and school board members includes many students of great ability. The disinterest shown by a student in academic studies does not always reflect lack of ability or aptitude. Oftentimes it reflects disinterest in academic subjects. Many of these so-called marginal and submarginal students simply prefer to manipulate machines rather than laboratory equipment or papers. Unfortunately, the advent of Sputnik caused great harm to these youngsters who had no desire to pursue technical and scientific subjects. The clamor among educators was, "Let's train more technical and scientific people. Let's send more of our youngsters to college." And, as a result, the needs of vocational education became subservient.

The value of vocational training must be honestly acknowledged, and these values must be made evident to those youngsters whose interests and aptitudes lie in this direction. The caliber of instructors and the quality of facilities must be just as high for vocational students as they are for others.

We must reevaluate, also, cooperative education in our high schools, because cooperative high schools, when properly established, deserve the understanding and esteem such schools enjoy at the college level.

Since the end of World War II, and particularly during the past 10 years, the occupational composition of Indiana's labor force has been undergoing rapid change. This development has brought on the recognition that workers of all ages and skills must undergo continuous educational retraining. The need for more vocational schools, and especially for more short courses, is apparent. These courses must both complement and supplement the courses now offered in our presently established schools. The Manpower Development and Training Act of 1962 has hardly touched on this problem. This training program has been valuable for many reasons and, especially, because it is serving as a catalyst in getting us to face up to the problems and the need of better vocational educations.

There is a lot more to our economy besides jobs. There is training, and an important aspect in the field of training is vocational training—vocational training for today, and vocational training for tomorrow.

There must be new methods of training in vocational education for training the children of migrants in rural areas, for training children of displaced workers who are forced to move from one area into another, not only within the confines of the State but from one area of the country to another.

There are not enough jobs going to Negroes, and there are not enough good jobs going to Negroes because Negroes, in many areas of the country, have had inferior education. By inferior I'm not referring only to quality, but to the type of training as well. Vocational training opportunities for Negroes in many areas do not exist. Where such training facilities do exist, they are unreal because good facilities and good instructors are not available to provide realistic vocational training—training that will qualify Negroes for job opportunities when they enter the labor force.

There are inadequate vocational training facilities for our handicapped children. While we emphasize, in trying to promote the employment of the handicapped, it's ability that counts rather than disability, we have not geared enough of our vocational training courses to permit handicapped children of all types to learn skills—marketable skills—to permit them to compete favorably with other members of the labor force. Innovation is certainly needed here.

In establishing and operating innovative and exemplary occupational educational programs or projects as called for by Congressman Brademas' two bills, we should think in terms of vocational training that could conceivably shorten the period of apprenticeship without affecting quality. In some instances it is felt that apprenticeships are too long because the youngster enters into such work inadequately prepared by his high school vocational training institution.

In recruiting and selecting and referring trainees under the Manpower Development and Training Act, we have found that training opportunities are denied certain trainees because of physical limitations. Some of these limitations were uncovered during employment offices interviews; others were not uncovered until the trainee had entered on duty at his training station. It is my suggestion that, in considering innovative techniques for improving vocational education, physical examinations should be accorded students so that we can train students in occupations that are within their physical capabilities. Our own employment service has been criticized for placing people, especially young handicapped people, in low-level jobs. But what employment alternative is there for an unskilled young man or young woman who hasn't been properly trained?

In general, I endorse wholeheartedly the ideas embodied in Congressman Brademas' two bills dealing with vocational education, and designed to amend the Vocational Education Training Act of 1963. However, there are several areas that I am not in agreement with, and I should like to detail these to you and tell you why.

I would like to refer to paragraph (3) of Congressman Brademas' bill H.R. 8456 which contains a provision for intensive occupational guidance and counseling during the last years of school and for initial job placement. I object to the inclusion of "initial job placement" because I feel that the various State employment services throughout the country comprising the U.S. Employment Service should have the responsibility for initial job placement of youngsters finishing vocational-technical schools. The argument for having schools do this is advanced by many vocational training people. They contend, "we know these people better, and therefore, we are in a better position to refer them to employers for employment than are other agencies." Well, in order not to dwell upon this subject too long, and belabor the point I want to make, I should like to draw an analogy. I think, for example, that I know my three sons better than their athletic coaches. After all, I've known them longer, I've done many things with them, I have seen them grow, and I have seen them experience many things. But, even so, because of my intimate knowledge of these three sons, I do not feel that I am qualified to tell their respective athletic coaches what positions they should play and in what teams they should participate. I think athletic coaches are expert in the field of athletics and they should make the determination. Likewise, I feel that employment service personnel are expert in the field of job placement, and they should make the initial placement of the youngsters who have received intensive occupational guidance and counseling during the last years of school. Finally, I find it difficult to equate funds expended for vocational education with that of job placement. The cooperative arrangement between our State employment service and vocational educational authorities as a result of the 1963 Act is working well. We see no need to change this by duplicating the responsibility of job placement efforts now assigned to the employment service.

Another area in which I find myself in disagreement, somewhat more mildly, is the failure to identify the U.S. Employment Service and its various State employment service agencies, in the bill, as the unit responsible for providing labor market analyses that might indicate a present and continuing need for training manpower in various occupations, and calling for courses of study that will be appropriately designed to prepare the students for entry into employment in such fields. The Department of Commerce is specifically identified as the agency responsible for furnishing the latest available estimates on the population of particular age groups of a State, and of all States, so why not specifically identify the employment service as the agency responsible for preparing comprehensive labor market analyses?

I agree with giving preference for compensated work under cooperative work-study arrangements to students from low-income families; however, I do not feel such preference should be to the exclusion of others. My concern in this area stems from the fact that I look upon the provisions of Congressman Brademas' bill, H.R. 8671, as providing better vocational education, rather than a program designed to compensate only needy students. All students should have the opportunity to experience the satisfaction of earning while learning. The presumption in this section of the bill should not be one of need, but rather of providing young people with the experience of being compensated for a job done well.

I do not want to conclude my remarks on these three suggestions or constructive criticisms, lest my testimony be interpreted as ending on a sour note. Let me say, then, in all my years of work with the Indiana Employment Security Division, which also operates the Indiana State Employment Service, one of the most important pieces of legislation enacted to upgrade the quality of our labor force, was the Vocational Education Act of 1963. By virtue of this act, a loose working relationship that the Indiana State Employment Service had had with the Vocational Education Department over the years has been intensified. Since the passage of the act, there have been many joint consultations between these two agencies, and members of our employment service staff have been appointed to various advisory councils of State vocational education boards.

I feel that the Vocational Education Act of 1963 is only a start in meeting our responsibilities of providing sound vocational education to our citizens. We must not only train people so they will be properly qualified when they enter the labor force, but train them so they will make highly efficient contributions in their jobs. This will permit the American economy to remain competitive in world markets and continue to be the most highly developed economy in the entire world.

By amending the 1963 act along the lines proposed by Congressman Brademas' bills, H.R. 8671 and H.R. 8456, the Congress will meet a really urgent present need, and needs of the immediate future.

Mr. **Brademas**. Thank you, Mr. Nicolini. Just following from the comment you made on the last page of your statement, in which you refer to the closer cooperation that was developed between vocational educators and employment security officers, as a result of the Vocational Education Act of 1963, I wonder if you could give us any further comment in light of the complaint by Mr. Wagner that we were not doing an adequate job of measuring job training with the job needs in a given area of the State?

Mr. **Nicolini**. Well, I think the Vocational Education Act of 1963, along with the Manpower Development Training Act of 1962, both serve as a catalyst in pointing up deficiencies that existed throughout our own State with respect to vocational training. It certainly pointed up the need for revamping our thinking along vocational education lines, and in answer to your question, the act of 1963 called for a cooperative agreement between the State Employment Security Agency and the State Department of Vocational Education. In brief, this agreement provided for the exchange of information between the two of these. I might say that just about a year ago I asked our office that we survey the results of this cooperative agreement stemming from the 1963 act between our offices and the various local vocational departments throughout the State. And I was pleased to learn that about two-thirds of our 31 offices had really good working relations with the school whereby both agencies exchanged information. The schools notified us of the type of persons they were training, the type courses, curriculums they were conducting, and we in turn furnished information to the schools regarding occupational needs, and results of various labor market analyses, so that the schools could determine feasibility for training in these shortage occupations. Everything isn't perfect by no means, but certainly this has been a very good start. This relationship would not have existed had it not been for the Vocational Education Act of 1963. That's what I meant in my concluding remarks. I feel it shoud be strenghtened. I feel the two bills that you have introduced will do this.

Mr. Brademas. I just have two questions. One touches on your criticism of the matter of allowing the vocational school to get into the field of initial job placement. First, you have had complaints, have you not, directed against your own office from private employment agencies that you as a public service are in this field?

Mr. Nicolini. Job placement, yes. That has been true since the act has been in existence, and the act was passed in 1933.

No one would argue that Notre Dame University is competition in the field of education with Indiana University. I think there is room for both, public and private provided both do a good job.

Mr. Brademas. If there is room for both there, why not have them?

Mr. Nicolini. I find it difficult, speaking solely on the funds expended for job placement. I felt this way when I had 6 years on the Mishawaka School Board. I just didn't agree with the school authorities that educators can do both jobs well. I think dilution results in both by trying to do both the training and the placement. The Employment Service should not be involved in the training of people. I think we determine vocational feasibility—rather we determine the needs, and the education training people determine the feasibility. As I tried to point out in my analogy, the intimate knowledge doesn't necessarily mean qualification for job placement. The job market is a complex market. The working relationships that interviewers have all over the country with employers, the intimate knowledge of job markets I think lends itself to the Employment Service doing the initial job placement.

Mr. Brademas. My last question goes to your criticism of this bill, that is to say the matter of emphasis given to work-study arrangements for students from low income families.

Mr. Nicolini. I said in my remarks that I hoped the preference would not mean the exclusion of others able to participate in the program. I tried to make the point that the experience of being compensated is an experience all youngsters should have.

Mr. Brademas. You don't object to priority for low income youngsters?

Mr. Nicolini. No, I think I made that point clear.

I certainly don't want the exclusion of others. I think it's important youngsters have this experience of being compensated for a job done well.

Mr. **Brademas.** Thank you. Yours was an excellent statement, Mr. Nicolini, with a lot of good facts and figures on job needs and skill needs in the State of Indiana. I think your statement will be very useful to many persons in our State concerned with this matter. Mr. Pucinski.

Mr. **Pucinski.** I want to join you in your congratulations. You gave a very excellent statement. I think it's good of you to come before the committee, tell us your views on some of the things in this bill that you may not like. Some people just tell us all the good things. I like people to tell us what the shortcomings are in a bill. I am wondering as to your statement about the initial job placement. Perhaps we are putting a different interpretation on it. Maybe we ought to try to clear that problem here, and we'll try to straighten it out in the report because the language reads programs or projects for intensive occupational guidance and counseling in the last years of schooling for initial job placement. Now, this particular paragraph refers to the overall development of private programs. I would think that this would certainly not preclude and probably encourage programs that would bring USES into the whole field in greater cooperation, closer cooperation in job placement. I don't think that this necessarily means that these innovative programs are going to concern themselves only with initial job placement. They can, but we are now talking about stimulation of projects. We are talking about projects that are going to try and set a base for further consideration, and it would be my hope that the U.S. Employment Service would play a much more significant role than it has in the past in a closer relationship with vocational education in the initial job placement. You are right. We spend a great deal of money as taxpayers on the USES. It would seem to me that this is an instrument that would provide the closer guidance and cooperation in vocational education. I am sure that when this comes out in the committee your views will be very much appreciated.

Mr. **Brademas.** Thank you very much, Mr. Nicolini. Our next witnesses will be Dr. Charles Holt, Superintendent of the South Bend Community School Corp.; Dr. Eldon Ruff, the Director of Guidance; and Richard Wysong, Director of Adult and Vocational Education.

STATEMENT OF CHARLES C. HOLT, SUPERINTENDENT, SOUTH BEND COMMUNITY SCHOOL CORP., AND RICHARD WYSONG, DIRECTOR, ADULT AND VOCATIONAL EDUCATION

Dr. **Holt.** The proposed amendments to the Vocational Education Act of 1963 will aid in correcting a universally acknowledged need in vocational education. The sections concerning vocational guidance, work-training operations, residential vocational schools, and emphasis on more complete training of vocational teachers and vocational counselors are of particular significance. A program designed to familiarize postelementary school students with the range of vocational occupations available, and to further acquaint them with the specific skills needed in these areas is a must in education today. In order to provide these services it has become abundantly clear that a concerted effort and a substantial monetary outlay must be forthcoming for the recruitment and the training of competent and knowledgeable vocational teachers and vocationally oriented guidance personnel. If this is to be done, some provision such as provided for in these amendments must be made to help defray the cost for the preparation of such personnel.

A familiarity with the range of occupations available and with the skills needed to enter such occupations will not in itself solve the problem. It has become increasingly apparent in recent years that there is an acute shortage of highly trained specialized teachers in the area of vocational education. This may well be the most serious problem in vocational education today. Financial encouragement for vocationally competent men and women to seek a degree and return to teach would be desirable. The section of the proposed amendments which provides financial help in developing and implementing programs for the training of vocational education teachers and administrators will be of aid throughout the country by providing a means to eliminate, at least partially, the present shortage.

The amendment of the definition of vocational education to make it clear that this includes vocational guidance and counseling is to be highly commended as is the provision that such guidance may be given to students prior to their making a choice concerning an occupation. The role of the guidance counselor must be expanded to insure a student's awareness of and preparation for work-study programs. The role must also be expanded as provided in the amendments to include initial job placement.

Residential vocational schools in the United States have been few and far between because of the initial financial outlay necessary. Yet if we are to provide equal educational opportunities for all students in the vocational field, the establishment of residential schools may well be a must. Some students, in order to insure an opportunity for success in school, must be removed from undesirable home environments. Others from smaller towns and from rural areas will never be able to avail themselves of vocational offerings unless residential schools are established.

In summary, the proposed amendments offer a practical solution to some pressing problems in vocational education.

The sections concerning vocational guidance, work-training programs, residential vocational schools, and emphasis on more complete training of vocational teachers, and vocational counselors are of particular significance. I guess if I were to state the question of the concerns that are mentioned to me most often by parents in this school corporation, particularly from parents of minority group children, it would be the lack of vocational guidance for these children. They express great concern, I think with some reason. They also have expressed concern to me about the problem or lack of program designed to familiarize postelementary school students with the range of vocational occupations available, and to further acquaint them with the specific skills that are needed in these areas. For example, I think one is an independent vocation they can be in until college. The establishment of this center here in this building is that they did apply a form to make of where are the possibilities for immediately negotiable skills on the part of people who will study here. I think this is important. I was surprised at some of them. I didn't know we needed television producers. We find that we do. This is one of the things that will be taught. I am told that we want to get out and sell these skills.

In order to provide these services that are mentioned in vocational education, it is abundantly clear that a considered effort and a substantial monetary outlay must be forthcoming for the recruit and training of competent and knowledgeable vocational teachers and vocationally oriented guidance personnel. I think the greatest need is innovation. We haven't done much training, much changing. I'm not here criticizing this lack of where-with-all in the past. I am somewhat disencouraged by home economics. This is always a problem. They show you a white sauce in 1967. I don't know how relevant that is to the preparation of people for the group. What I am saying is there hasn't been innovation. We remain in a group of bird-box builders pretty much. One of America's greatest scholars, if you recall, could not study the American high school. He came to the conclusion that the comprehensive high school rather than the vocational high school per se was a ticket for competent study. Of course, I don't agree with this. I think that one of the reasons we have the things that have been mentioned is because it's been included in a framework of academic education. I think here was a high school principal in Chicago, a class of 1,200 where a boy who ranked No. 3 didn't go to college. He wanted to be a printer. We all got upset about the smart kid who is going to be a printer. The kid say, "I don't want to go to school. I want to be a printer." He owns a printing shop in Chicago. We should have known that. I think we actually tend to downgrade vocational education in the school. I think we must develop vocational high schools now.

There is no more expensive education anywhere than vocational education in terms of equipment and so on. I think that we must go at it this way. With reference to the question Congressman Pucinski raised on the training of administrators versus the number of teachers, I would say there is great need for training both. On the other hand I think that one of the mistakes that legislators made in the past was lack of provision for administrators, because you see, I and my counterparts can do a lot. We need to know more about it. We have tended to look at it as something of secondary importance. The administrator as well as the teacher is in need. This is one. I think there has been a stigma somewhat in vocational schools. Lane Technical High School is a pretty high place. We all can't have Lane Tech, I know that, but we can have programs that approach that in quality and comprehensive nature of the whole programs, and if you have tried to employ a teacher of automobile mechanics in the last few years, you know what you face for this. It is virtually impossible to find people who work in these fields. It gets more difficult every year. I would say this too, that we do lack innovative ideas in the public school, so do the higher institutions, if not worse.

I think some efforts might be used in stimulating them a little more in innovation, and I don't know that our Commissioners are good particularly in vocational education as it might be. I think financial encouragement for vocationally competent men and women to seek a degree and return to teach is one of the desirable and important things.

I think the definition of vocational education makes it clear that this includes vocational guidance and counseling, and is to be highly commended. We have looked at them as something separate. Our counselors have been academically oriented. I think this is excellent.

The residential vocational schools in United States have been few and far between and it's because of the initial financial outlay that this is necessary. I think if we are going to provide equal educational opportunities for all students in the vocational school, the establishment of residential schools will be of extreme importance. I think we may find that in a four-county area here in this region and of vocational technical colleges that there is a need for a residential school, and some students must be removed from their undesirable home environment. Some from smaller towns, rural areas have the opportunity to avail themselves of vocational offerings. That could be a residential school. With regard to our relative position in the world, technically, I was amazed yesterday to find a group of Japanese at O'Hare Field studying training methods. They photographed everything from the hot dog stand to the stand-up bars, and the workmen sweeping the floors. These people, I did question them: "What are you doing?" And they are improving their training methods to handle an airport operation. They know what they are doing. They're there to get this. They will take it back. "Where do you propose to do it?" They are going to institute programs there and are on a study of this now.

In regard to what role the private agency may play, I think one of the things we have going for us is the interest of the chamber of commerce in our program, particularly vocational programs. They've worked hard. We have had great cooperation as well as a cooperative effort in the parochial schools in South Bend. I think it's excellent. I am looking forward to a time when we will be looking at shared facilities, shared programs; because I'm not much concerned with who the kid is, but what they can do. I think these are excellent. I commend you.

Mr. **Brademas**. Thank you, Dr. Holt. Dr. Ruff, are you going to speak next?

STATEMENT OF DR. ELDON E. RUFF, COORDINATOR, GUIDANCE SERVICES, SOUTH BEND SCHOOL CORP., AND PRESIDENT, AMERICAN SCHOOL COUNSELOR ASSOCIATION

(The prepared statement of Dr. Ruff follows:)

Mr. Chairman and Members of the General Subcommittee on Education:

I appreciate this opportunity to present testimony in support of the 1967 amendments to the Vocational Education Act of 1963. I am speaking as Coordinator of Guidance Services for the South Bend Community School Corporation and as President of the American School Counselor Association, a division of the American Personnel and Guidance Association.

My remarks have been developed as a result of my experiences in these two capacities and through my experiences with children as director of the summer Job Counseling Center established in 1964 for school dropouts under an NDEA grant; as director of Project STEP, the local branch of Neighborhood Youth Corps; and as director of a forthcoming three-week workshop for counselors in our local area designed to assist counselors in increasing the vocational maneuverability of students.

To emphasize the recognition of the need for programs as outlined in the 1967 amendments, I would like to present some of the recommendations that have been prepared through evaluations of the impacts of the projects mentioned above.

JOB COUNSELING CENTER

In preparing a report on the 1964 summer Job Counseling Center project, the following recommendations were submitted by the staff from their experiences in the project:

Recommendation I.—Guidance, counseling, and psychological services should be strengthened throughout the twelve years of schooling. A real effort should be made to provide guidance specialists at the elementary level to work with the potential dropout at the time he first experiences learning difficulties and to try to eliminate the cause of the problem at its source.

A relationship seems to exist between the occupational, economic, and educational level of parents of dropouts and the length of time the dropout attends school; thus, a program for the involvement of parents in educational activities is indicated during the "golden years" of youth. Home attitudes toward education must become more postitive before the student reaches high school.

Parents of dropouts seem to have a distorted view of the responsibility of the school. Needless to say, there is a lack of communication between the home and the school. It does not appear to be strengthened through present methods, i.e., P.T.A. meetings, open houses, etc. The job counseling staff made 91 house calls from among 191 students simply because of the inability and/or reluctance of the home to seek the services of the counseling center. The counselor should be allowed and expected to make frequent home visitations in such instances. This will require a departure from the traditional concept that staff responsibilities are confined to the school building throughout the school day.

In addition, the guidance staff and the entire school staff need to be made more aware of the existing services available in the school and community in order to maintain a closer working relationship with the various community agencies.

Recommendation II.—One counselor should be designated as a follow-up counselor for the school system. His work would be exclusively with dropouts who by and large do not maintain contact with the school once they leave. The dropout simply wants to "go," and not until he has experienced the reality of adjustment to the adult world does he recognize the need for help.

It is believed that a majority of the seventy boys who had counseling interviews at the job counseling center were helped in some manner to find themselves and to find their place in society. This is indicated by the final disposition of the counseling cases reported in the findings of the study. If our assumption is true, and we firmly believe that it is, then we see the summer project as a real contribution to the lives of these young people and to the total community and should be continued on a regular basis as a part of our total school program.

Recommendation III.—Work-study programs should be expanded to meet the needs of more students. These programs have been very successful in our schools in the past, and they seem to be meeting the individual needs of the potential dropouts better than our traditional programs. The expansion of the work-study programs should take place in the freshman and sophomore years; otherwise the student may drop out before this type of program has had a chance to be of service to him. Job opportunities need to be expanded to include more service and unskilled occupations for those students who do not have the ability to handle skilled jobs but who could benefit from the practical experiences provided by a work-study program. These students have a contribution to make to society if we but permit them to make it.

Recommendation IV.—Our school programs must be made more flexible to meet the needs of students who cannot benefit from our traditional programs. It is believed that more flexibility can be achieved without throwing our standards by the wayside. The ends of elementary and secondary education are not the diploma *per se*. For the potential dropout there is need to provide course offerings with the high school diploma not entirely in mind. The offerings should be flexible to the extent that it would build competency in a vocation, competency in meeting life situations, and at the same time make better citizens from our youth who are potential dropouts.

Recommendation V.—Vocational education needs to be expanded to meet the needs of more students. The wide variety of vocational courses called for could probably be best provided in a vocational school. In some cases it would be desirable not only to have students enrolled in the school but also to have them reside there in order to remove them from an undesirable environment. This approach would correct one of the major obstacles for their educational failure—that of poverty and the conditions which poverty breeds.

SOUTH BEND NEIGHBORHOOD YOUTH CORPS

After the first year of operation of the South Bend Neighborhood Youth Corps program, an evaluation was made. Out of this evaluation grew several implications for guidance. The implications which related to the amendments under consideration are:

1. Disadvantaged youth have different vocational development patterns than youth from normal environments. An area well worth exploring more fully is that of the vocational development of disadvantaged youth as compared to that of the youth from normal home environments. Present observations would tend to indicate that while many senior high school youth are going through the exploratory state of their vocational development, the disadvantaged senior high school student has not even approached the fantasy stage. Life for him has been so void of hope in many cases that he does not even picture himself in the fantasy roles that most other children go through before they start the exploratory stage.

2. Expanded work-experience programs in the high school curriculum are needed. One of the fears confronting the staff when the Neighborhood Youth Corps program was initiated in South Bend was that young people would hesitate to take part in the program because of its identity with poverty. This was a fear which was completely unwarranted. The youth have looked upon the program as a real opportunity for them to earn money, to gain work experience, and to gain self-confidence and self-respect. Dropouts have developed a sense of identity by joining a group "where the action is." The fact that there have been many applications (which could not be approved) from youth from middle and upper income families tends to support the idea that at least in the eyes of the young people it is not just another poverty program but a real opportunity to gain work experience.

These applications from youth of all economic levels wanting work experience would cause one to believe that schools should explore more fully the possibilities for expanded cooperative work-experience programs within their curricula. These programs should not be designed just for the B average or better student and limited only to those with perfect attendance records but should be designed to give all young persons a chance to prove themselves and justly earn the self-dignity they so eagerly seek.

3. Still another idea which needs further exploration is that of the use of sub-professional or support personnel in the school guidance field. The work-coordinators in the South Bend NYC program are local, non-degree persons who work closely with the counselor as a team member. They are able to perform many of the routine functions with proficiency. They make contacts with work supervisors, enrollees, homes, and other concerned agencies. They are able to release the counselors from many of the routine, noncounseling activities so that the counselors, as professionals, can utilize their training and skill to the fullest degree. There are many routine and clerical tasks now being performed by school counselors which could be handled by a non-professional staff. These tasks could be accomplished at less cost and probably with a higher degree of proficiency by the non-professional staff. This would release the counselor for more contact with the student—within the school setting and in his environment outside the school.

VOCATIONAL GUIDANCE WORKSHOP

In the development of the vocational guidance workshop for this summer, several areas of concern were incorporated into the project. These concerns are:

1. There needs to be a much closer working relationship between the schools and the business and industrial community.

2. Counselors need to broaden their experiences with the work world, to become more familiar with entry jobs and the requirements for various entry jobs, and to become better acquainted with all the non-college type post-high school educational opportunities.

3. Occupational information about the local community and about non-professional jobs needs to be expanded and new methods need to be devised for presenting it more meaningfully to high school and pre-high school students.

4. Vocational education needs to closely examine the product it is selling, and if it is not salable in a space-age economy, then it needs to look toward the development of a product which will be salable and profitable in a space-age economy.

In briefly reviewing the recommendations from previous projects and the concerns from the proposed summer project, I thing that it is evident that we here in South Band are wholeheartedly in agreement with the 1967 amendments to the Vocational Education Act of 1963 and strongly urge the Congress to support the passage of these vital amendments.

AMERICAN SCHOOL COUNSELOR ASSOCIATION

To further magnify the support given by local educators and counselors, as president of the American School Counselor Association, an association of 15,000 school counselors throughout the fifty states, I would like to emphasize the concern of our association by giving several examples of recent or pending action taken by the association.

1. A newly created committee has been formed jointly with the National Guidance Association to do an intensive study of guidance in vocational education.
2. A special issue of the *School Counselor*, the official journal of the American School Counselor Association, devoted solely to vocational guidance will be forthcoming.
3. The 1969 association yearbook will devote itself entirely to the topic of vocationl guidance.
4. In our recent national convention in Dallas, Texas, the association chose Grant Venn, Associate Commissioner of Adult and Vocational Education of the U.S. Office of Education, to be our keynote speaker. His topic was "Making Vocational Guidance Real to the Non-College Bound Student."

The above examples are but a few of the activities in which the American School Counselor Association is engaged which relate directly to the topic of our concern in this field hearing.

SUMMARY

In summary, I would like to add that I have used these examples from the South Bend Community School Corporation and from the American School Counselor Association to indicate the vital concern we have as counselors and as educators, both locally and throughout the nation, for the improvement of our educational program to the point where we can identify and develop the strengths or talents which represent for *each* youth his best chance for a future career.

If we continue to believe that the schools are the best place in which an individual can develop his potentials to the fullest, then we must continually strive to provide opportunities in the school which will permit each individual to develop his particular strengths and talents.

The 1967 amendments give additional strength to the Vocational Education Act of 1963 so that schools can continue to strive toward the goal of providing the opportunities necessary for all youth to develop to their fullest.

Dr. RUFF. I think I will just briefly summarize some of the major points that I've tried to bring out in the written area, and I've tried to pull from several projects that have taken place in the past, some of the recommendations that bear upon the testimony here today. Just briefly, one would be the summer project that we had in 1964, working the school dropouts. We established a job counseling center. Some of the other recommendations come from our local Neighborhood Youth Corps program, and currently we are preparing a workshop for counselors in the area of vocational guidance, and so the remedy that I have listed in the written testimony here has come from these various activities, and I thought it was important to bring these out, to give you the feeling that we have recognized many of the things that are in these amendments. We appreciate the concern that the Congressmen have at this point, and hope that they will support these amendments to the fullest extent.

And so just briefly then some of the concerns that I have brought out from our recommendations in these various projects—first of all we see a real need for expanded work study programs. From our experience with youth from regular backgrounds to the youth from disadvantaged backgrounds, we find that they are very much interested in obtaining this experience. For example, in the Neighborhood Youth Corps program which is limited to low income families, we had many young people from very high incomes applying to our program simply because they wanted the work experience. They were not concerned that it was a poverty program. They wanted the work experience and saw this as one means. Of course, we couldn't permit them to enter the program.

Another factor of the work study program that we saw was the need for a lowering of the age limit in some cases, particularly for the potential dropout, a work study program geared to the 11th and 12th grade is of no value to that youngster who drops out in the ninth or tenth grade. So we would need to work out some of work study experience for this youngster at a lower age. Another factor that was quite prevalent was the lack of flexibility that we sometimes have in our school programs. We tend to aim toward the diploma per se as maybe the goal; where in some cases I think we need to take a look at this youngster as to what we can do to prepare him for society, to be able to develop vocational programs within our schools to prepare our youngsters for society regardless of whether he goes ahead to complete the diploma or not. Of course, this would be the ultimate goal, that they have a diploma. We know all youngsters are not going on to that extent. We need something that will prepare him for society.

The point that Dr. Holt mentioned in regard to residential schools is important also, we see many youngsters coming from home environments, from the rural towns, and from the small towns that could definitely benefit from the residential type programs. Another point that I think was pointed out very vividly from our work with the disadvantaged youngster was that the vocational development of this youngster is not the same as that of a youngster from the average home. He has not even gone through what we would call the fantasy type occupational experience as a high school student, in many cases, whereas most of the youngsters are going through an exploratory stage at that time.

We've got to take a look at this vocational development pattern and provide more information through counseling, guidance, and through the instructors at the prehigh school stage. I think this is very important.

We felt in preparing many of these programs that we really ought to take a look at some of our vocational programs, and we saw the real need for updating of the instructors in the space age economy, and the institutions that are proposed here I think would be one real solution. I think we have seen a tremendous improvement for our overall guidance and counseling program since the advent of NDEA Institutes for preparing counselors. I think this would be very beneficial for the vocational teachers. We also see a real need for closer working relationships between business and industry and the schools. I think we no longer can say that we as educators know the answers as far as vocational education is concerned. We've got to look to business and industry and take the things that are best from all areas and incorporate them into a meaningful program. I think this is important that we bring together business, industry people with ideas and regardless of where these ideas are from, utilize these ideas in preparing our school programs.

Counselors very definitely need to be upgraded in the occupational areas. They need to be provided with orientation to entry jobs. What are the jobs that approximately 50 percent of our youngsters will be going out into immediately upon leaving the high school?

Another point that I just mentioned in my prepared paper is I think the feeling of counselors across the country is that our national association has taken on a number of projects that relate directly to what you are pointing out in your amendments. We have established committees that are studying vocational education. Our association devoted a special issue to the field of guidance and vocational education. Our 1969 yearbook will be devoted entirely to the field of vocational guidance. At our last national convention, Grant Venn from the U.S. Office was our speaker, our keynote speaker; talking to the need for vocational guidance for the non-college-bound student, and so I think that here again we are seeing a real recognition of the need for help in this area, and I think that these amendments would bring that type of help that is being recognized as needed not only by local counselors and educators but by counselors throughout the country. So I see these amendments as providing a real boost to a need we recognize, and being able to permit us to work with youngsters and helping them develop to their fullest, as essential.

(The article referred to follows:)

PREPARING COUNSELORS FOR DEVELOPING A MAXIMUM RANGE OF VOCATIONAL MANEUVERABILITY IN STUDENTS—A PROJECT PROPOSAL IN VOCATIONAL GUIDANCE

I. BACKGROUND

A rapidly changing job market which demands more and more preparation on the part of the job entrant provides a challenge to counselors and educators in general to gain a broader perception of the talents of youth. It is imperative that the school counselors broaden his concern to a research for the positive elements and strengths of all youth.

As the Sputnik-propelled pendulum slowly swings back from societal pressured idea that college attendance is the ultimate of preparation for every person, counselors must realize that their task is not that of searching out the academically talented but it is that of searching out the strengths or talents which represented for *each* youth his best chance for a future career.

One of the basic principles of our democratic society is that each person has the right for the opportunity to develop his own best talent for his personal satisfaction as well as for societal benefit. As counselors, educators, parents, and community leaders concern themselves with a meaningful educational program and with career planning for youth, they must broaden their awareness of and respect for the dignity and worth of all useful occupations in which youth seek to fulfill their future.

In order to properly focus upon the essentials of career planning for youth, school counselors must continually reorient themselves to the world around them and not get caught in the educational milieu surrounding them. Counselors must be cognizant of the fact that educational and vocational guidance is not a dichotomy. If a counselor hopes to help a young person prepare for the world of work, he must constantly be aware, particularly in today's advanced technological work force, that good vocational counseling is based on good academic counseling. He must also be aware that his primary task in vocational guidance is that of developing a maximum range of vocational maneuverability in the students he counsels.

School counselors have for many years given student occupational information, have conducted career clinics in various forms, and have provided students with vocational guidance. There are several factors, however, which have hampered the efforts of the best meaning counselor. First of all—at least in recent years—societal pressures have demanded increasingly more and more attention be given to the college-bound student at earlier and earlier ages. Society has placed a great premium on college attendance.

Another factor causing vocational guidance to be regarded in second place in counseling priorities is the fact that most counselors are academically oriented and many have never had work experiences outside the educational field. Being human, they tend to do those things they know best. Thus, counselors, with their academic orientation, tend to spend much of their time with those students who have clearly indicated a preference for the academic world.

A third factor, equally important, in producing this vocational guidance void is the lack of initiative on the part of business and industry to provide counselors with adequate occupational information. In the past approximately 75% of the occupational information literature available has been about occupations covering 10% of the jobs available, the majority of these being in the professions.

Still another factor which has provided a void in proper vocational guidance has been the nature and quality of vocational education being offered students.

Vocational educators need to take a close look at the product they have to sell and decide whether or not it is something that will sell in a space-age economy. If it is not, then the product must be changed so that it will sell. Further, vocational educators must be their own supersalesmen. They must get out and sell their product to students, administrators, and parents just as the scientists, mathematicians, and fine arts people have sold their products.

All of this discussion leads to the problem at hand, an absolute necessity for immediate local action. This action can come in several forms. First, counselors, vocational educators, school people in general, and business and industrial leaders must open and maintain better lines of communication. We must talk to one another seriously about the task at hand.

Second, counselors need to engage in an intensive self-examination of their motivations and actions. If a counselor cannot honestly say that he has given equal attention to each student regardless of his future educational aspirations, then he needs to seriously reconsider his role as a counselor.

Third, business and industry needs to give serious consideration to its role in providing counselors with accurate, up-to-date information about job opportunities open to young people entering the work world.

The above background information lays the foundation for the following proposal for a summer workshop in vocational guidance.

II. A STATEMENT OF THE PROJECT

The project is designed to prepare 18 school personnel from eight school districts in northern Indiana to more adequately meet the vocational guidance needs of students.

One counselor will be selected from each of the 14 high schools. This person, although not assigned specifically to vocational students, will become the vocational guidance specialist in each school. It will be his responsibility to keep up-to-date on changes in the job market, training and educational requirements for various entry jobs, and to keep alert to trends in the various vocational areas. He will be responsible for keeping the guidance, administrative, and teaching staffs in his building alert to current vocational information. He should serve as the liaison between the school and business and industry in regard to vocational guidance.

One elementary and one junior counselor are included on an experimental basis to see what can be developed at those levels in order to improve the vocational development process of children from the time they enter kindergarten until the time they leave the school setting. It will be the responsibility of these counselors to develop experimental vocational guidance programs within their respective schools and to take the leadership in working with other counselors at those levels in developing similar programs.

Two school administrators will be selected in order to provide a team approach to the vocational guidance philosophy and in order to maintain administrative feasibility in the vocational guidance programs proposed for the schools.

The project will be for a duration of 3 weeks, June 26 to July 15, 1967, on an intensive 8:00 a.m. to 4:00 p.m. basis.

The first week of the workshop will be used to establish a firm basis on which to develop the remainder of the workshop. Working with the Graduate Dean of the School of Education at St. Mary's College, a series of five basic areas have been developed. Each area will be explored with national authorities in the field. Each day will consist of a major presentation, a panel of interrogators, and small discussion groups related to the topic of the day.

The remainder of the workshop will follow a different schedule. The morning will be spent in a discussion of the relationship between curricular offerings in schools and occupational opportunities in the community, current occupational trends, entry requirements in the various vocational areas, and a discussion of observation experiences. Specialists from the various curricular and vocational areas will be brought in daily to lead discussions in their specialties.

The afternoon sessions will be devoted to planned observations in the six vocational areas covered by vocational education in Indiana. These will be actual on-the-spot observations and experiences with businesses and industries in the South Bend community. A discussion period will be provided daily to analyze the planned observations from the previous day.

III. OBJECTIVES

The objectives of the project are as follows:

1. To help counselors gain a better understanding of the way workers in various vocational settings perceive their work and perceive the relationship of their work to their way of life.
2. To help counselors understand the rapid technological change taking place and the impact of this change on the work force.
3. To help counselors more fully understand the relationship between the school curriculum and vocational opportunities in the community.
4. To identify occupational trends which have significance for curricular change.
5. To establish and maintain open lines of communication between school counselors and the industrial and business community.
6. To acquaint counselors with occupational information materials, sources of materials, and the effective utilization of such materials.
7. To acquaint counselors with vocational resource persons and with effective ways of utilizing resource persons.
8. To help the business and industrial community recognize their role in preparing youth for the labor force.
9. The ultimate objective of the workshop is to prepare school counselors to relate their understandings of vocational offerings and vocational opportunities to students—thereby providing sound vocational counseling.

IV. PLAN FOR CONDUCTING THE PROJECT

A. PRE-WORKSHOP SEMINAR

In order to open lines of communication, discuss basic needs, and establish areas of responsibility, a one-day pre-workshop seminar is proposed in early spring. The seminar will involve business and industry leaders, vocational teachers, school administrators, and school counselors.

The seminar will be divided into general sessions and small discussion groups. The general sessions will discuss the over-all concerns of business and industry and the concerns of the schools in regard to vocational guidance and the preparation of youth for tomorrow's labor market. The small discussion groups will be devoted to specific needs of the various vocational areas and will determine the basic relationships needed to function properly.

Detailed workshop plans will be developed from the concerns and needs expressed in the seminar session.

B. DAILY SCHEDULE

The three-week period will be divided into two segments. The first week will be conducted in cooperation with the graduate school at St. Mary's College and will provide opportunity for earning two units of graduate credit. Five basic background areas will be considered during the first week. These areas are:

I. Career Development Theories
II. The Vocationally Oriented Student
III. The Role of Business and Industry and the Expectations of Education
IV. The Role of Vocational Education and the Expectations of Business and Industry
V. The Role of Vocational Guidance and the Expectations of Society

Each area will be introduced by a nationally recognized authority in the field. Each presentation will be followed by a panel of interrogators representing business, industry, vocational education, and guidance.

The afternoons during the first week will be spent in small group discussions relating to the topic of the morning. The groups will discuss the topic as it relates to elementary, junior high, senior high, college, and adult-community counseling.

The second and third weeks will follow a schedule as follows:

8:00– 9:00 a.m.—Curricular offerings in school and their relationship to vocational development
9:00–10:00 a.m.—Educational and vocational demands in selected career fields as seen by specialists in the field
10:00–10:15 a.m.—Break
10:15–11:45 a.m.—Vocational seminar
1. Discussion of current social, economic, and technological trends in the labor markets
2. Preparing youth for jobs that do not now exist
3. Making use of community vocational resources
4. Using occupational literature
5. Analysis of planned observations in business and industry

11:45– 1:00 p.m.—Lunch
1:00– 4:00 p.m.—Planned observations in selected vocational areas in the community
1. Distributive occupations
    a. Retail sales
    b. Merchandising
    c. Service businesses
2. Business occupations
    a. Clerical
    b. Accounting
    c. Secretarial
    d. Machine operation
3. Health occupations
    a. Dental assistant
    b. Medical assistant
    c. Nurse aid
    d. Practical nursing
4. Home economics occupations
    a. Waiters, waitresses
    b. Food service
    c. Restaurant and hotel management
    d. Clothing
    e. Utility company demonstrators
5. Agriculture occupations
    a. Sales
    b. Horticulture
    c. Processing
    d. Mechanical
6. Trade and industrial occupations
    a. Apprenticeable trades
    b. Jobs requiring training beyond high school
    c. Entry occupations

C. SPECIAL AREAS OF EMPHASIS

The following areas will receive special emphasis during the workshop.

1. Utilization of *Dictionary of Occupational Titles* and the *Occupational Outlook Handbook*
2. Training program in industry
3. Apprenticeship programs
4. Trade and vocational schools
5. Indiana Vocational and Technical College and its relationship to high school programs
6. Developing an occupational information library for a school
7. Vocational development of youth with emphasis on the occupational decision-making process
8. Utilization of community resources for vocational guidance
9. Vocational testing

D. FOLLOW-UP

In order to continually up-date information of vocational guidance nature, periodic workshop sessions will be conducted throughout the year. It is anticipated that these will be held every six weeks and will be two or three hours in duration.

The nature of the sessions will vary according to the needs of the participants Examples of workshop sessions might be:

1. Discussions with business and industrial leaders
2. Tours of businesses and industries
3. Analysis of informational materials.

E. ADVISORY COMMITTEE

An advisory committee was established to help in the development of the current proposal. This committee will be expanded to include representation from all major vocational areas in the community and representatives from the various school districts participating in the project. After the workshop, the advisory committee will continue to function in an on-going capacity in order to maintain a continuing liaison between business, industry, and the schools.

Mr. **Brademas**. Thank you, Doctor.

Mr. Wysong.

Mr. **Wysong**. Our statement that was made by Dr. Holt was a combined statement, but I'd like to specifically make note to the needs of competent men and women, that is, competent in vocational skills, to get them into teaching. I would propose maybe on a scholarship basis of some sort. That, or maybe a loan basis where they would not have to pay the loan back if they taught year for year, whatever they got in grants. If they stayed in teaching for 4 years that would augment the 4 years of training. I think it's very good the amount of money that you are specifying to strengthen existing programs. I think it's fine to have the innovative program, but I think that programs need to be strengthened, keep upgrading the existing programs. I think the tie of counseling between the junior high, senior high, post-high school, I think this is important; rather than having all three going in different directions. With the ratio in schools of 1 to 500 between a counselor and student, he probably spends 90 percent of his time on 10 percent of the students. The ones that are going on to the high degree program and the ones that are giving him problems. The average student is left more to tend for himself. I think anything that we can do to help lower this ratio to where the vocational counselor can work with the average student, this is important.

One of our big needs on our evening adult programs that I did not see, there may be some place in here, that there might be a place for is that in our evening high school program—all right, this is not vocational, but it's also not available under the Secondary Education Act that I know of—is that where can we get money for vocational counselors to help through our evening high school program. Certainly they're just academic programs, but these people are upgrading their skills, getting their high school diploma, and probably improving themselves on the job, so we need vocational counselors here. It took us 2 years to begin getting money from the 1963 Vocational Education Act, so I can see this act will even take quite a few more years after this is passed; so I am sure the needs will be far greater than what we see today.

On the new innovative programs, one of the biggest problems in this, I think, is dissemination of information. So somebody has a new program, innovative program. We down in the grassroots do not hear what's being done some place else. This is important to others in the United States so that we know what's going on and to avail ourselves of. Maybe something that somebody else has experienced.

Mr. BRADEMAS. Thank you very much, gentlemen. These are excellent statements. I think I have three or four questions to ask, and I will yield to Mr. Pucinski.

Following the point you were just making, Mr. Wysong, on this matter of recruiting vocational teachers, how can we go beyond the suggestion you have just made for scholarships?

Mr. WYSONG. I see a tremendous potential, for example, in your evening apprenticeship program. Here in Cline School we have 23 tradesmen teaching at night for our apprentice program. Here are maybe 23 people that have enjoyed teaching, that might be encouraged to go on and get their degree. I'm sure there are other places. I don't know what type of selecting procedure we would have to go through to select this, but I know there are people, older men, I would say middle aged men with families that just cannot afford to go back to college.

Mr. BRADEMAS. Any other suggestions?

Dr. RUFF. I might just add here that perhaps we need a different certification for the vocational people and see if the complete academic proving ground we require of all teachers is as necessary for vocational teachers. Perhaps we need something like the MAT program of Notre Dame where they bring in people who have undergraduate work in various types of areas, concentrated programs on the graduate level to prepare them for teaching. Perhaps something like this could be done where we would find skilled tradesmen who have skills in the teaching area, but do not have an education, and concentrate on the development of educational programs that would prepare him for teaching.

Mr. BRADEMAS. Dr. Holt, I wonder if you would briefly tell us the status of the residential vocational school which is contemplated would be located right here in the building?

Dr. HOLT. I don't know that that is mine. We have four counties in this area. There are problems presumably to serve. I don't see how effectively it can serve them adequately as a residential part, because when you think of youngsters that come from three counties other than St. Joe, or even St. Joe County, the ones that really need it are least likely to get here. That is a rural area. While I like the idea here in this area where many of the low income youngsters can walk to this, I think that is important, I am still concerned about outlying areas. What do we do? I think we must think in terms of a residential school.

Mr. BRADEMAS. So the school is not necessarily to be put on this site?

Dr. HOLT. Not necessarily.

Mr. BRADEMAS. When do you think you'll get going on this school?

Mr. WYSONG. The initial schedule is to get this under way either late summer or early fall. We expect to open the doors a year from this fall.

Mr. BRADEMAS. I was struck very forcibly by the great emphases in the statements of both Dr. Holt and Dr. Ruff on vocational guidance. I am much impressed by the article that I have read in the South Bend Tribune about your summer workshop for vocational guidance. Without objection, I would insert this article at this point in the record. The article, by Roger Birdsell, is entitled "Vocational Guidance Is 'Shop' Topic."

(The newspaper article referred to follows:)

[From the South Bend Tribune]

VOCATIONAL GUIDANCE IS "SHOP" TOPIC

SUMMER PROGRAM SET BY SCHOOL SYSTEM

(By Roger Birdsell, Tribune Education Writer)

Dr. Charles C. Holt, superintendent of the South Bend Community School Corp., today announced plans for a $10,310 three-week summer workshop in vocational guidance for school counselors.

The workshop, which the Board of School Trustees is being asked to approve Monday, is being financed by the Indiana State Department of Public Instruction with federal funds under the Vocational Education Act.

Holt said 14 high school counselors, two elementary and junior high school counselors and two school administrators will be selected to take the workshop based at St. Mary's College under its graduate education department.

A counselor will be selected from each of the eight high schools in the South Bend system—John Adams, Central, Clay, Jackson, LaSalle, North Liberty, Riley and Washington.

OTHER SYSTEMS INVITED

In addition, the Mishawaka, Penn-Harris-Madison, New Prairie, Union-North, Lincoln-Polk-Johnson and Elkhart school systems have been invited to send one high school counselor each to the workshop.

Each participant will have his tuition paid and will also receive a $75-a-week living-cost stipend.

Dr. Elden E. Ruff, co-ordinator of guidance services for the system, will serve as workshop director and Eugene Glod, co-ordinator of adult education, as workshop co-ordinator.

Russ said the workshop program has been developed in consultation with Dr. Arthur Smith, head of the education department at St. Mary's, and with the South Bend-Mishawaka Area Chamber of Commerce and area business and industry.

RELATE TO OPPORTUNITIES

Ruff said the overall purpose of the workshop is to help school counseling staffs better relate their work with students to the actual vocational opportunities in the community's business firms.

"One of the special features of the workshop is that the counselors will spend half of the day for two weeks out in business and industry," Ruff noted.

"Here they will have the chance to get acquainted with personnel people, plant managers and others involved in the employment of youth as they are graduated from school.

"They will become acquainted with the demands placed upon a worker in an entry job and learn the requirements needed by a graduate to fill various entry jobs.

"Through these practical experiences and through better lines of communication with business and the industrial community, it is hoped that each counselor will be able to more effectively guide young people as they prepare for their vocations."

The workshop is a recognition that many high school students are not bound for college and that in some ways the high schools have not been doing as good a job as they should in assisting these non-college bound youths, Ruff said.

Vocational education and guidance have suffered, he explained, from the growing emphasis in society on a college education and the generally academic orientation of most school counselors.

Another factor, he said, has been the lack of initiative on the part of business and industry to provide counselors with adequate occupational information. It has been estimated, he noted, that 75 per cent of the occupational literature available covers 10 per cent of the jobs available.

ASSIGNED AS SPECIALISTS

Each high school counselor taking the workshop is to return to his school with a specific assignment as the vocational guidance specialist for the school, Ruff explained.

In this capacity, the counselor will keep abreast of the current job market and its educational and training requirements; alert the entire school staff to these job market needs, and serve as liaison between the school and business and industry.

In order to assist the counselor in this task, Ruff said, periodic conferences with business representatives are planned in the future and an advisory committee of such representatives has been formed.

Two elementary and junior high guidance people are being included in the workshop, Ruff said, in hopes they will subsequently develop experimental vocational guidance programs at that educational level.

CLASSROOM SESSIONS PLANNED

The workshop will run from June 26 to July 15. The first week will be devoted to general background information. In the following two weeks, classroom sessions will be held in the morning and business visitations in the afternoon.

The workshop will cover distributive occupations, business occupations, health occupations, home economics occupations, agricultural occupations and trade and industrial occupations.

Emphasis will be placed on the use of occupational information materials; training programs in industry; apprenticeship programs; the Indiana Vocational technical College and other trade and vocational schools; vocational testing; utilization of community resources, and the occupational decisionmaking process.

Mr. **Brademas.** I would hope that other communities would emulate your example in stressing vocational guidance and in counseling. This is one of the things that always upsets me. I have felt that too many of our vocational teachers simply have not been keeping abreast of what's going on out in the world of technology or industry. I don't say that it's easy to provide intelligent counseling for the youngsters and to be able to help the vocational educators and teachers offer the right kinds of courses, not courses in bird box building.

Well, let me make two other comments, then I will invite your comments. I think that what I have just said on the question of vocational guidance is linked to two other comments that you stressed yourself. The one is Dr. Holt's observation that we need in our programs much more stress on innovation.

The other point that you referred to is exchange of information with industries and how to get industry more involved. Isn't it fair to say that these are all related questions? If we could get first, greater commitment on the part of the industry and business in an area in support of working closely with the vocational educators; and second, a strong commitment to quality in vocational education just as we are trying to do through Title III of the Elementary and Secondary Education Act to promote innovation and exemplary projects and improved quality in elementary and secondary education, then we would really be on the move in vocational education. It would be first-class education. It would be up to date. It would be made available in immediately negotiable skills.

Dr. Holt, do you have any comments to make on those comments and especially in reference to our situation?

Dr. **Holt.** I think the things alluded to are perfectly right. We need the vocational teachers and counselors out at Bendix and such places to find out what must we develop in the skills. Recently we had someone come in on our recommendation and see if these boys could be hired. We didn't come up with much. Indictment or our lack of drive in this whole area, lack of funds, enough people to do this bothered me that we weren't able to come out. I think you are perfectly right. I think we have to get out and reexamine things where they have the jobs. I think the most important thing to the kids is immediately negotiable skills.

Dr. **Ruff.** I might just add in preparing this summer workshop, we have excellent cooperation with business, industry. They are to the place where they see this need as well, and this work experience will be a continuous type of thing so that at least we'll begin this next fall having one counselor in each school. He will be responsible for keeping the rest of the staff updated as to what is currently out in business and industry, and the business and industry people have agreed to work with this, not only the summer, the 3-week period, but on a continuous basis reacquainting people throughout the year through 1-day workshop programs. So we are really looking forward to this type of relationship that I think is beginning to develop.

Mr. **Wysong.** I think Indianapolis has something where they have on the salary schedule work experience for up to 10 years. I think maybe this is something that needs to be incorporated more places where going back to school will give them monetary raises on the salary schedule. I think work experience is going to have to do the same thing.

Mr. **Brademas.** Mr. Pucinski.

Mr. **Pucinski.** Dr. Holt, I was very happy to hear you make the statement about home economics courses. I have got a 1-man campaign going in this country to have all housewives sign the initials D.E. after their names the way doctors are M.D.'s, Congressmen M.C.. industry, D.D. I want housewives, you see, to put D.E. to get them out of the housewife category and put them where they belong, as domestic engineers. This is my way of trying to upgrade the whole skill of the American housewife who really are not fully appreciating all the things we can do.

I was wondering if you have any suggestion on one point. This legislation, of course, goes a long way in meeting the needs of vocational education, and I think we both can agree that we've gone through a kind of sophisticated era of American education where vocational education was relegated to the role of stepchild. We still have some people in the Office of Education who think that, but I think thy're beginning to see the light. I wonder if we can devise some way, and I don't think we can do this through legislation, to impress upon school boards this same thing? You made a very significant statement here that certainly vocational education is one of the most expensive types of education in the school budget, and so distinctly and traditionally economic-minded school boards would have it occasionally made the first victim of an economy drive. What can we do, and do you have any suggestion on what can be done to reorient this school board thinking, some of the school board thinking, make them realize that while it's expensive at this level, that if we had had a really effective vocational education program in this country 30 years ago, I don't think we would have needed the war on poverty in this country today. It's ironic that we have not been able to convince them that because of inadequate education programs—particularly vocational education programs—we are spending $2 billion every year on the war on poverty. That is the result of some pretty sad thinking around this country in the last two or three decades in the educational level.

Dr. **Holt.** I think one of the things that will help what you are bringing here, the training of administrators, which are a great influence on the board and their thinking particularly now as we're involved in preparing budgets that we'll present on recommendation to boards of education. Where we put the emphasis makes a lot of difference in their thinking. I think this would be a long step forward. I think the State school board association might be brought into this to highlight this in their program. I think this has begun to a degree. I think in the meeting last year they were paying some attention to vocational education.

Mr. PUCINSKI. Dr. Holt, the Office of Education would like us to take section 6 of our bill, which provides for training of vocational education teachers and administrators, and transfer this to title V of the Higher Education Act. Now, I must admit to you that I am very much opposed to this concept, with all due respect to Commissioner Howe and the others, only because I am afraid that this vocational education program is going to get lost in the shuffle again as it always has. When we get this into the university level, with all due respect to institutions of higher learning, they continue to look upon vocational education as a stepchild in too many instiutions. So I was wondering if you would care to comment on whether or not we are wise in insisting that there be specifically earmarked in this bill a program for fellowships in vocational education and for administrators and school counselors. Can we risk putting this into title V of the higher education bill and take a chance of it getting lost in the shuffle?

Dr. HOLT. I would leave it here. When I look at vocational guidance counselors, the amount needed for them, I compare that with the high student-teacher ratio, and primarily grades in particular, and decide where that goes to. I think earmarked in these ways is the ticket. You have to assure that this is going to happen. I think that's important. The vocational people in higher institutions still aren't swinging much of a stick in colleges. They are still not quite respected.

Mr. PUCINSKI. Dr. Ruff, would you care to comment?

Dr. RUFF. Yes, I would leave the funds right where they are again for the reason that we are setting up the 3-week workshop here at the low level. The college—the counselors, educators at the college level again are somewhat removed from what is happening at this low level. They see emphasis on other areas than vocational education. And it definitely needs to remain right in the bill where it is.

Mr. PUCINSKI. Right here where it is specifically earmarked. Mr. Ruff, you have made a very significant contribution here in this whole proceeding. I agree with you. As I looked at the educational program, our greatest single need, and there are many needs, teachers, classroom facilities, equipment, but I am coming to the conclusion that our greatest single need in the educational community in America is the need for training experienced counselors. I recently did a study of the school system in Washington, D.C., which as you know is in real serious trouble, and which is a school district that is 92 percent nonwhite, which is tremendous. I came to the conclusion that one of the greatest shortages coming in this whole system is the lack of adequate counseling where these youngsters can, through guidance and counseling, be given a better understanding of what we are trying to do with them. The teacher can't do that. She doesn't have time. We find youngsters who really don't know what it's all about. In their darkness, they drop out or show no interest, and nobody has really sat down to show them a relationship of what's happening to them, how this is going to affect them in the future, and what they can do to affect their future. I really believe that this counseling is the real problem in this country. I would hope that my colleague from Indiana, the Chairman today, Mr. Brademas, who is the most knowledgeable in the field of education on our Committee, would perhaps consider some special legislation in this field; because I think the need is that great. I would yield to his better judgment. I was wondering if you have any ideas of how we can strengthen this bill to make sure that is adequately presented in the whole spectrum of vocational education. Do you think the language here is sufficient? Do we need further additional clarifying language here to make sure that we meet this great need of counselors?

Dr. **Ruff.** The one thing that probably isn't spelled out here, I don't have the bill here with me, the one place it indicates funds for training the counselors, administrators, and teachers, and then where it goes right down specifically, it specifies the money specifically for teachers and administrators, and I was wondering what you are thinking in regard to training of vocational counselors? Do you see this as something under some other provision, some other act, under NDEA, or do you see a need within this particular bill?

Mr. **Pucinski.** You notice that paragraph C of section 6 in the bill, I believe would refer to it. That's why I wanted to find out from you if you feel the language is sufficient. Perhaps you may want to fully answer that question, maybe you'd like to think about it and drop us a note because of the point that you made in this hearing on the importance of counseling. I agree with you. I want to make sure that this legislation reflects the kinds of language that it needs.

Dr. **Ruff.** I would be happy to study this in detail and prepare something to send to you.

Mr. **Pucinski.** It begins on page 17—the qualifications of persons engaged in or preparing to engage in teaching, counseling, supervising, or administering vocational educational programs. Each individual who attends an institute, operated under the provisions of this subparagraph, shall be eligible for the period of his attendance at such institute, to receive a stipend, and so on. Perhaps you would just like to take the time, maybe you want to study the language, perhaps you would like to let Congressman Brademas know of any additional language you would like to put in here.

Mr. **Brademas.** That would be fine.

Mr. **Pucinski.** Just yesterday we had a young boy, a Negro boy, that had gone to Marshall High School. It's a tremendously crowded high school. It's just an ordinary high school, and this young man was struggling along with a C average, probably really would not have gone very far. A counselor called his attention to the new Westinghouse Vocational School that we had built out on the west side of Chicago. Consequently, this young fellow transferred to Westinghouse. The most amazing thing, this youngster now is an A student. He has a scholarship to one of the great universities, and he is going to pursue a course in electrical engineering. A whole new vista of opportunity opened up for this young fellow simply because somebody stopped long enough to counsel with him and show him some opportunities that he was not aware of. You can't help but ask yourself how many millions more like that boy are there in this country.

Mr. **Brademas.** If I may, Congressman, that point was touched on in Dr. Ruff's testimony when he was talking about the importance of doing more intensive communication between counselors in the system. One of the difficulties I take it you must encounter is how do you get at these kids?

Dr. **Ruff.** I think one of the things in the written testimony I prepared brought out one of our current weaknesses, that is, that the counselor's role tends to confine him to the school building. His role should take him wherever the need is. If it's out in the home talking to the parents or working with that youngster, there should be enough flexibility that that's where he goes.

Mr. **Brademas.** Do you feel, if my colleague will further yield, that the people in your profession are not going to be too frightened by the kind of shakeup and innovation that we are trying to encourage in this legislation?

Dr. **Ruff.** I think they will welcome it. I point out some of the examples, things that are going on across the country now in our School Counselors Association. We recognize many needs and are searching for answers. I think these are some of the things that will lead us in that.

Mr. **Pucinski.** This is most reassuring. As I said earlier today, in 30 months, which is like tomorrow, one out of every two youngsters is going to be in the vocational education program. Nine and a half million youngsters are going to be knocking on the doors of all kinds of vocational programs in this country. The question is, will we have the counselors, will we have the teachers, the facilities, to meet that need? Mr. Ruff, you said we need vocational guidance for the non-college-bound students. Perhaps this is where the problem has arisen, as Dr. Holt has described, that the general reputation of vocational education is a place for dropouts, kids that just aren't going anywhere. I must repeat I was astounded to find that seven out of 10 youngsters that we talked to yesterday from 10 vocational schools in Chicago, are going on to college. I believe five of those seven had not intended to go to college before they came into the vocational education programs, but having gotten into vocational education programs, they became inspired to go on to higher education. So maybe one of the things that we should do is stop thinking in terms of vocational guidance as being only for non-college-bound students. We are going to find that more and more of these kids probably will be stimulated to go on to college by the experience and by the excitement that they can find in a vocational program.

Dr. **Holt.** I was surprised recently to hear the dean of a college of engineering, a very good one, say that one of the things needed most by the bright young men going into this college is the prior development of manipulative skills, the kind of skills you get in vocational education. They can academically handle the math and sciences. They need to know the skills that they can do.

Mr. **Pucinski.** The president of the Chicago Teachers Union, in Chicago yesterday made a recommendation, and I don't know whether you gentlemen wanted to comment on this. We want some feeling down here in Indiana. He recommended that we might give serious thought to dropping the Job Corps and turning the money over to vocational centers. He felt that the educators who run the vocational centers, including the residential centers, could probably do a much more effective job, and I was just wondering if any of you care to get into that?

Dr. **Holt.** I have to think about that. I hadn't thought of it.

Dr. **Ruff.** Just a quick reaction. I think from my observation really there is nothing that is being done in these programs that couldn't be done in our single educational program if the funds were provided. The same thing that applies to, for example, our Neighborhood Youth Corps program and work experience program. After spending a year as director of this program here, I can see many of the things that were being done that could have been done and should have been done in the schools if that same amount of money had been provided for the same.

Mr. **Pucinski.** One of the witnesses in Washington made a similar suggestion that we replace the Job Corps centers with the residential centers as provided in this legislation, since 1963. He suggested that we are careful, though, in maintaining a good balance. The point was if we were to take all of the youngsters who were now engaged in the Job Corps, youngsters who come from low-income families, that many have social adjustments before they get the Job Corps skill. If you were to transfer this into the residential vocational centers, there might be problems that such centers could not handle. His suggestion was that you try to maintain a ratio of 20 percent Job Corps youngsters and add 80 percent who are interested in vocational education, and intermix, which would be the greatest therapy in the world. For 20 percent who now are all grouped together in some Jobs Corps, I think there is some merit to that. I was wondering if you had any suggestion?

Mr. **Wysong.** I think this sounds good, because getting them used to living as the average youngster, I think like you said, is good therapy.

Mr. **Pucinski.** Well, Mr. Chairman, I must say I want to congratulate you. The testimony this morning was tremendously impressive, and it underscores again the value of taking these committees out of Washington and bringing them into these communities to hear what the people in local communities have to say. I would just like to wind up with this remark. We talk about vocational education as the downgraded education. Yet, I find the industrial giants of America, the men that today hold the most dominant positions in American industry are men that really started out pretty much in an experience such as offered by vocational education schools, so maybe what we ought to do is put on a campaign to let youngsters know how the industrial giants of this country really got started, with all due respect to liberal arts colleges and various other professions, the fact remains that these men who today are giving us the greatest prosperity we have ever seen in this country are to a great extent men who started in a simple manner, some skilled for drafting, some skilled mechanics. As you said, wasn't it, Mr. Holt, about the boy who now owns a printing shop. That is a story to be repeated. Thank you very much.

Mr. **Brademas.** Thank you very much. I want to thank all the witnesses today. We will break at this point for lunch. We will reconvene at 2 o'clock sharp at which point we will have Mr. Charles Lawshe, vice president of Purdue University; Dallas Sells, president of the Indiana State AFL-CIO; and Frederick Hadley, president of the Indiana Vocational Technical College. Following those three, there will be a panel of three witnesses to conclude the hearing, Mr. James Beaudway, R. K. Smith of Michigan City, and Mr. Eli Miller, of Mishawaka Chamber of Commerce.

The Chair would also like to observe that statements have been submitted for the record by Mr. Robert C. Riley, John Tort, and Stanley Ladd. We will adjourn, and welcome all of you who would like to come back at 2 o'clock.

(Whereupon, at 12 o'clock, the subcommittee was adjourned.)

Afternoon Session

Mr. **Brademas**. The subcommittee will come to order. We've had some extremely interesting testimony presented this morning on the Vocational Education Act Amendments of 1967, and Congressman Pucinski and I have benefited greatly from what this morning's witnesses have had to say on these bills. I'm very pleased to welcome our afternoon witnesses to the hearing.

Our first witness this afternoon is Mr. Charles Lawshe, vice president of Purdue University. Mr. Lawshe, would you like to present your companion?

Mr. **Lawshe**. This is Dean George McNally, dean of the school of technology of the university, who came along as a companion.

STATEMENT OF CHARLES H. LAWSHE, VICE PRESIDENT, REGIONAL CAMPUS ADMINISTRATION, PURDUE UNIVERSITY

Mr. **Lawshe**. Mr. Chairman, my name is C. H. Lawshe. I hold the position of vice president for regional campus administration at Purdue University. In addition, I am chairman of the Indiana State Board of Vocational and Technical Education which is the designated State agency to administer the several Federal vocational education acts and the funds that accrue therefrom in the State of Indiana. My appearance here today in no way represents either the university or the State board. I have been in public education for 37 years, at almost every level and in numerous positions including that of vocational school administrator, and have a deep interest in and concern for public vocational education as a segment of the total educational spectrum. My remarks will be directed primarily toward H.R. 8671 inasmuch as it appears to encompass all or most of the provisions of H.R. 8456.

APPROPRIATIONS LIMIT INCREASE

My first observations are directed at the proposed increase in the appropriations limit. It is my personal view and conviction that this is sorely needed in our State. My conviction is supported by enrollment projections that have been prepared by the State department of public instruction for the secondary field and by the Indiana Vocational-Technical College for the postsecondary field.

In the former, the secondary field, projections indicate (table 1, p. 7) that the number of high school students enrolled in vocational programs will increase from 71,000 during the current year to over 111,000 in fiscal year 1971–72, an increase in excess of 55 percent. I hasten to add that this estimate is based upon a simple numerical extrapolation of enrollments for programs that are currently in being, or approved, and does not in any way reflect any increases which might result from (a) program innovations, (b) improved curricula, (c) improved vocational guidance, or other factors of a qualitative nature. I am personally convinced that the improved secondary facilities which are coming on stream as a result of the 1963 act will, in themselves, make vocational education more attractive to more high school students than has historically been the case. This influence alone will increase the requirement for additional operating funds far beyond these projections.

In the postsecondary field, the projections are even more significant. It is estimated (table 2, p. 8) that enrollments will increase by at least 160 percent from fiscal year 1967–68 to fiscal year 1971–72. It is important to point out that these postsecondary projections are not statements either of manpower needs or of demands for training; instead, they are realistic estimates of the number of enrollees that expected economic resources can accommodate. The manpower training requirements of our State, on the other hand, are quite another thing. Depth studies have indicated that the State of Indiana, in fiscal year 1967–68 will have a net training requirement of almost 23,000 (table 3, p. 9). The term "net training requirement" refers to the deficit between the number of persons who will be produced by ongoing training programs and the gross manpower requirements for new positions in the State. With reference to my earlier statement, the estimated number to be trained next year by the Indiana Vocational-Technical College is less than one-fourth of this deficit.

In short, the State of Indiana is sorely in need of increased vocational education funds at both the secondary and postsecondary level. The welfare of individuals who need training is at stake, and the economic future of the State will be markedly affected.

INNOVATIVE PROGRAMS

Vocational education, as I have known it, has suffered in the immediate past from many negative influences and conditions, of which two are germane here. The first of these, sometimes called the sputnik syndrome, has involved a very major emphasis in our secondary schools on science and mathematics as college preparatory subjects. Obviously, no self-respecting educator would permit himself to be perceived as not supporting science and mathematics in high school; but that isn't the point. The point is that the large majority of our general high schools have been predominately college entrance oriented; the last decade has brought about an even sharper focus on this objective. "Good" high schools tend to be judged largely in terms of the number of merit scholarship winners and the number of students admitted to Ivy League institutions.

The second condition emanates from vocational education's long-term equipment orientation. Machine tools, for example, are tremendously expensive. Once tools are acquired, there is a tendency to retain them, even though they are obsolete, and to continue to restrict course content in terms of the available equipment base. Particularly in secondary schools, the results of these two conditions have been stultifying: (a) not enough bright and creative educators have been attracted to the field; (b) vocational education has become a stepchild, unfavorably perceived by students, parents, teachers, and guidance counselors; and finally (c) those responsible for vocational education programs have predictably tended to become defensive, protective, fearful, and in consequence uncreative.

In my view, innovation has not taken place to the extent it should have, as a result of the 1963 act. Even though many, if not most, of the traditional constraints were removed by the 1963 act, in a qualitative sense, not much has changed in many quarters. Traditional vocational educators still pour the new wine in the old bottles; they strive, and sometimes fight, to preserve the now holy compartments of agriculture, home economics, et cetera, with which they feel more comfortable and more secure.

H.R. 8671 provides an opportunity for breakthroughs by way of its specific provision for the planning and development of innovative and exemplary vocational programs. While almost any kind of innovative or demonstration project would seem to be possible under the proposed amendment, the specific encouragement of programs designed to familiarize postelementary school students with the broad range of occupations for which specific skills are required is noteworthy. It would be my hope and expectation that the certain prospect of financial support for these programs would do much to revitalize vocational education and to bring it into phase with the last half of this century.

RESIDENTIAL SCHOOLS

I wish to support the added emphasis which H.R. 8671 would place on residential schools. I have a positive conviction that many of the problems of the central city, as they relate to the unemployability of the disadvantaged segment of our society, will not be solved until we recognize, in program terms, the role which home and neighborhood environment plays in the perpetuation and reinforcement of cultural deprivation. To the extent that my thesis is correct, removal of youth to high quality residential centers seems to be an answer. The commingling of disadvantaged youths with those from more fortunate circumstances holds great promise. While I confess that my data are limited, I have been involved in an upward bound program. This program took a number of young people out of their homes and neighborhoods and housed them in undergraduate dormitories on a university campus. While our evaluations are, admittedly, subjective, the results are fantastic. Attitudinal changes seem, really, to have taken place. My only concern, with respect to the amendment proposal, is (a) that the operations, including living quarters, be genuinely of high quality, (b) that there be commingling, and (c) that standards be established to preclude the diffusion of funds to so many centers that quality could not possibly be maintained. Many State boards, under political pressures, are tempted to distribute their resources over too many sites; to the extent that they yield, results are questionable.

PRIVATE CONTRACTORS

Unlike many public educators, I do not fear equitable competition from the private sector of the economy which might seek to enter the field of vocational education. In fact, it seems possible that true innovation might conceivably come from a private agency that is bound up in the traditions of the past. But please note that I said, "equitable competition." Many administrators in public institutions are becoming increasingly concerned with the position of those Federal agencies which permit a profit by a private contractor and, at the same time, insist on some amount of cost sharing by an educational institution or group of institutions. In addition, there have been instances in which private firms have bid against public institutions, have been awarded the contract, and have then raided the institutions of their qualified personnel. In numerous fields, of which vocational education is one, the total national manpower inventory is quite low. Many private bidders do not have in-house capability, and following the contract award, are forced to draw on the scarce supply. The Congress should concern itself with those institutions which are trying to maintain a capability in the face of these odds. Conceivably, a private firm might obtain the award and deliver the results, but do so under circumstances which deplete the institutions' personnel resources to the point that future functioning is rendered impossible. Every public agency which is currently participating in Federal vocational education funds is sharing the costs; this is true of secondary schools, of junior colleges, and of technical institutes; it is true of colleges and universities which are under contract to State boards for teacher training and ancillary services. One could reasonably question, then, the entry into the arena of private firms (a) which would not share costs, and (b) which would, in addition, earn a profit. This is what I mean when I speak of equitable competition.

SUMMARY

In summary, I support H.R. 8671. I believe its passage, in both a quantitative sense and in a qualitative sense, will bring Indiana closer to the achievement of the goals of the original Act.

Mr. **Brademas**. Thank you very much. Yours is an excellent statement. I say that perhaps because I'm especially gratified to see the passion with which you express your concern that we improve the quality of vocational education and that we not allow ourselves to be bound by old traditions. Indeed, Congressman Pucinski and I back in 1963 were among those on this committee who worked hard to help drag vocational education kicking and screaming into the 20th century. We tried then to make the point that there are some people in our country who do not live on farms. It is important to take into account that ours is an increasingly industrial, increasing urban society. I just have two or three questions. How can we attract more able vocational teachers?

Mr. **Lawshe**. I think that the only cue or guideline we have here is to point out how we have done it in other fields, how we got more people into the guidance field. We literally attracted them on scholarships and fellowships. This amendment certainly makes provisions for that. My only concern is that on a national basis the total number of fellowships is pretty low. Any little bit will help, however.

Mr. **Brademas**. Would you like to see funds earmarked for fellowships and training support for vocational counselors, administrators, and teachers as distinguished from a proposal presently before the full committee which would in effect lump in these several categories with a more broadly conceived education professional development act?

Mr. **Lawshe**. I think, Congressman, this is mandatory.

Mr. **Brademas**. What is mandatory?

Mr. LAWSHE. That it can be earmarked for vocational education. If you include it with all education you maintain the present interrelationship; you just raise the whole level. You are not going to guarantee greater proportions to vocational education. I am not familiar with the chapter and verse in the specific legislation, but we have had legislation in the past that has provided a combined loan and grant mechanism. Loans are made to individuals, then if they stay with the profession, half of the loan is forgiven, or schemes of this general nature. I think if we tailor some programs in vocational education along these lines, we would hit one of the problems of vocational teacher preparation which is unique in all of education. That is, we want the individual to be college trained on the one hand; we want the trade competency and occupational competency on the other. How you bring a merger of these sorts of things is difficult. Historically, when the biggest emphasis was on the crafts, we used to try to entice bricklayers, plumbers, carpenters, et cetera, into colleges and universities. We never had an overwhelming success here.

Now, we have the same problem with greater magnitude in that we're talking about a technological age, and I see a big opportunity for vocational teachers in these technical fields to have some kind of combination program between a 2-year associate degree and/or technical institute training with the technical training followed by a junior and senior program. If the 2-year technical program has really done its job, the man is employable at a very high salary level, he is truly occupationally competent. How are we going to get him to say lay that aside and take the junior year and senior year, I think you are going to have to help financially some way. I think if we can somehow attract the top 10 percent of these 2-year technical graduates into an honest teacher training program by some fellowship loan or grant device, we have likelihood of solving this problem.

Mr. BRADEMAS. I might say, Mr. Lawshe, I was one of the sponsors in 1963 of the Technical Education bill which ultimately made its way into title I of the Higher Education Facilities Act of that year. This act provided in the undergraduate grant section of the bill for a 22 percent set-aside for the construction of 2-year college level facilities for technical institutes and junior colleges, and other 2 year institutions, for programs aimed at the kinds of semiprofessional college level technicians of whom I think you are speaking. I'm very interested to see you make that suggestion.

One of the problems we then found—it was a new field for some of the members of our Committee to get into—was that there were all kinds of battles and wars raging among various groups. We had a hard time getting the vocational educators and technical educators separated.

On page 4 you make the observation that you think it's especially important to familiarize post-elementary-school students with the broad range of occupations for which specific skills are required. I take it you mean we ought to do a lot more in the field of guidance?

Mr. LAWSHE. I don't want to speak against the importance of guidance in its more traditional sense. What I have in mind here is something that would more nearly qualify as a vocational exploratory course. Now, historically, we have had a cleavage between the industrial arts people and the vocational people. Any training that didn't keep the student solidly in one area was not vocational education: "therefore we can have no part of it." Yet, and here I am getting a little beyond my competence, because I don't exactly know how one would organize it, I think we need to take young people, perhaps 9th and 10th graders and give them exploratory exposure to occupations and industrial processes. I suspect this is something that nobody really has now. It's not perhaps the traditional industrial arts, and it's not vocational education as we now know it, but it's vocationally related, perhaps shop exploratory, perhaps to a familiarization kind of experience. I think it should have laboratory ramifications. As I say, I'm probably a little out of my depth.

Mr. BRADEMAS. I want to ask you some questions about your position in respect of the fact that you are Chairman of the Indiana State Board of Vocational and Technical Education, but I see Mr. Hadley and Mr. Noel who will represent Mr. Sells who is a member of the State Board.

Mr. LAWSHE. Neither of these, you got mixed up.

Mr. BRADEMAS. Maybe I will just go ahead and ask you my questions right now rather than try to relate the two. I'd be grateful if you would give some indication of the nature of the relationship that you have. As I understand it, you are the Chairman of the State Board of Vocational Technical Education. Mr. Hadley is the president of the Indiana Vocational Technical College, is that correct, sir?

Mr. HADLEY. Yes.

Mr. BRADEMAS. Perhaps, Mr. Lawshe, you could make a comment on, first of all, the difference between those two operations. And then secondly, if you would give us some indication of the nature of the relationship of Purdue University in the State Board of Vocational Technical Education to the Office of the State Superintendent of Public Instruction? I'm not trying to get into the controversies which I am aware exist, but mostly to understand the terms of Federal-State Vocation education programs in our State.

Mr. LAWSHE. Let me start by saying for many, many years I don't know how long, I suppose 20—the State of Indiana has had the Commission on General Education of which the State superintendent is chairman. Now, for many years, by Indiana statute, this Commission was designated as the State Board of Vocational Education, and it sat in single session, but performed some functions as the general commission and some functions as the State Board of Vocational Education. Until the passage of the 1965 Indiana statute, it was the "State agency" which received the State funds, et cetera. Now, in 1965, the general assembly created the State Board of Vocational and Technical Education, designated it as the official agency to receive all Federal funds relating to Federal vocational education programs, and directed it "to divide and distribute said funds between the Indiana Vocational and Technical College and the General Commission." Now, I must digress here at the moment and get into Mr. Hadley's area, but the law that created Mr. Hadley's agency is very, very specific in that it is to be the post-high-school agency in the State of Indiana, and this statute went on the books in 1963. It was strengthened in 1965, and the general assembly in 1967 refused to alter it; so the Indiana General Assembly has looked at this different matter three times at 2-year intervals.

Now, the problem comes from the fact that while the General Commission was functioning as the State Board—and, of course, we can almost use the General Commission and the State superintendent's office interchangeably—there wasn't a clear-cut demarkation between what was done in the name of the State Board and what was done in the name of the State superintendent's office. Consequently, when the General Assembly separated these, as one would expect, there was some reluctance in the State superintendent's office to yield some of these authorities. Furthermore, the law creating the Indiana State Board said that it shall have "all of the powers," authorities, et cetera formally vested in the old agency. Now, what we have is continuing friction——

Mr. HADLEY. May I interrupt to interject something? I want to make it clear, traditionally in Indiana all public post-high-school vocational and technical training or education has been conducted by local school boards, you see. It has been entirely true in Indiana. Now, IV Tech has become an institution which was directed by the General Assembly to devote itself exclusively to post-high-school vocational technical education what had always been carried on by local high schools as it is in South Bend. This is where friction has developed.

Mr. LAWSHE. There have been many people who haven't liked the general assembly's action. There have been people, including the previous superintendent and the present superintendent, who do not like it. Many members of my board are in the very unpleasant position of having to do the very best we can to follow the statute, and at the same time, cope with these people who feel that this was the wrong way to do things. Those of us on the board had nothing to do with the legislation.

Mr. BRADEMAS. Who now has charge in Indiana over the distribution of Federal vocational education moneys?

Mr. LAWSHE. Our board, the State Board for Vocational and Technical Education.

Mr. HADLEY. It was created primarily for that purpose.

Mr. BRADEMAS. How do I interpret the story that I read this week? I haven't taken any side, because I'm not sure what it is that the fight's about.

Mr. LAWSHE. This doesn't embarrass me in the least. The board of which I am a member, is in the process of figuring how it should distribute funds. The assignment of program authority was perfectly clear, the State department of public instruction has always been and should continue to be interested in vocational education at the secondary level. This is not in dispute. The law is very, very specific that IVTC is to have the postsecondary mission, so we said we will pass to IVTC funds for postsecondary programs. Now, the no-man's land is what people refer to as the "regular adult evening program." These have been conducted in the public schools. Now, what are we going to do? If we place them in the public schools, this seems like it doesn't follow the intent of the statute that said IVTC was to look after postsecondary vocational education. If we give it to IVTC we seem to be infringing on the longtime prerogative of the secondary schools. This was the toughest decision of all, and it was debated and studied, and finally the board took action some year and a half ago, I believe, and said that because these have been done in the secondary schools, they ought to continue to be done in the secondary schools, but we're going to pass the money for them via IVTC. And I'd like to state why this decision was made. Under the traditional system, and Mr. Smith can speak for this, the old State board gave Michigan City or some other city funds for evening adult programs; these, of course, were only partial funds, and the only way the superintendent could make up the difference was through money garnered from the local taxpayers. IVTC, on the other hand, receives a State appropriation. Now, we said if we pass the money to IVTC and, if, over time, State appropriations increase, there is a strong possibility that IVTC can support adult education in the local communities at a higher level. This was the basis on which the original decision was made. I want you to know it wasn't made easily. Many different proposals were made. My memory is that this was about a year ago.

Now, the State superintendent is a member of the board. He attended the second meeting. I believe this was last week. He took objection to what the board had done prior to his becoming a member. We did not have a full membership present, incidentally. He made a motion to change the previous action, and the motion carried, as I recall, 4 to 3. I don't consider this action to be really serious.

Mr. BRADEMAS. I understand much more clearly now. I don't say that I know what the answer to your problem is, but at least I have a clear picture of it. The only reason I raise the question is because it's my State and because Federal funds are involved. We'll have Mr. Hadley's views. Congressman Pucinski.

Mr. PUCINSKI. Mr. Lawshe, did I understand then that the Indiana State Board of Vocational Technical Education disburses all of the Federal funds in the State of Indiana?

Mr. LAWSHE. All Federal vocational education funds in accordance with Federal law and regulation.

Mr. PUCINSKI. Do you have occasion to turn a local community down?

Mr. LAWSHE. We receive all requests either through Mr. Hadley's agency or via the State superintendent's agency. The screening is accomplished in one of the agencies.

Mr. PUCINSKI. They have a project, and the question I'm trying to find out is if they have a program they feel they want for their community, they apply to you for the funding over and above whatever they provide in their own funds, is that correct?

Mr. LAWSHE. You are talking about construction?

Mr. PUCINSKI. Construction project or some program within the vocational scale.

Mr. LAWSHE. Let me distinguish between program or operating funds' support and construction project support, because they really are two different things. The way that the board has functioned thus far—and remember the board has been in being only 15 months—and there is a lot of experience we have to get yet in developing the projected activity program which we lay out and present to the U.S. Office of Education is as follows: we first of all say that out of total anticipated Federal allotment from the 1963 act we are going to spend *x* dollars on secondary programs. That's the first kind of "pie cutting" that goes on. Then we say that we are going to spend so much on post-secondary programs.

Mr. PUCINSKI. The question I'm trying to find out: Do you make those decisions, do you ever override, veto the recommendations or requests by the local schools?

Mr. LAWSHE. We have not had an occasion to override. If we could talk about secondary vocational education then the State department of public instruction, having been told the amount allocated to it makes the apportionment of those funds, and we approve it. Now then, in the case of construction, we told, in the current year, the State department of public instruction we had allocated roughly a million and a quarter dollars for secondary school vocational construction. Now, they had something like 30-plus community projects submitted to them, and we considered it to be the State department's job to establish criteria and to set up the priorities. They came to us with five of these projects which equaled the amount we had earmarked; we allocated in accordance with their recommendations.

Mr. PUCINSKI. Getting down to the bill before us, in section 3, this sets up $30 million for innovation on exemplary programs. You will notice—let me read this from the bill: "There are authorized to be appropriated $30 million for the fiscal year ending June 30, 1968, and such sums as may be necessary for the 4 succeeding fiscal years to be used by the Commissioner for making grants to or contracts with State boards or local educational agencies for the purpose of stimulating and assisting, through programs or projects referred to, the development," and so on and so on. The question comes up in my mind, if I understand correctly how your board functions, that if the U.S. Commissioner wanted to enter into agreement or contract with the South Bend Board of Education because he felt that there was a program going on here that would meet the innovative and exemplary criteria that we are trying to develop in the whole field of vocational education, I gather that under your process here he could not do that. He would have to go through you and get your approval of that contract.

Mr. LAWSHE. I can only guess at what Federal regulations might be written for the new bill. The way I read this draft is that the Commissioner would have the option of dealing with the local school. This is my interpretation. The Commissioner could receive an application from our board, or he could deal with the city of Chicago or South Bend.

Mr. PUCINSKI. You understand it that way. That is the way I understand it. This is what puzzles me: Can the Commissioner come into the State of Indiana and enter into an agreement pursuant to this provision and clearly the law before us would give him that authority. The information I'm trying to find out is does your State law permit this to happen? As I understand the testimony here, you and your board supervise expenditures of all Federal funds for vocational education. I'm trying to find if you have conflict here?

Mr. LAWSHE. I don't think there's any Indiana law that precludes the Commissioner from going directly to the educational agency. Current practice emanates from Federal law.

Mr. HADLEY. The law does not say that your State agencies shall receive all Federal funds.

Mr. PUCINSKI. The distinction here is whether they are given to the State or to the city of South Bend. If they are given to the city, then you don't come into the picture.

Mr. LAWSHE. I would see nothing wrong with this. I would assume that this authority for the Commissioner to deal with a city is directed at large cities or toward these instances where one might have a complex of cities that might straddle the State line or something of this sort.

Mr. PUCINSKI. I don't think that I would want the record to create that impression. I wouldn't want someone later on to say this is what we had in mind, because you know we're very concerned at the Federal level with local operation and low autonomy. So I would interpret this language to mean that if indeed there is a program going here in South Bend that sounds extremely exciting, innovative, and can make a substantial contribution towards some new technique in vocational education or if there is a program going in some little village down here south of South Bend, the Commissioner of Education, as I read this thing, would enter into an agreement with the local school board or local education agency, and would not have to necessarily clear this thing with the State.

Mr. LAWSHE. That is the way it reads to me. I think that would be a good feature.

Mr. PUCINSKI. Now, your table 1 shows some rather revealing facts I wonder if we could get you to expand on. I notice that 1966 and 1971 you show relatively slight increase in agricultural projects, but you show a very substantial increase in business training program, and of course, you show a very substantial increase in distributing in health occupation, in home economics programs. You remain reasonably stable, then you have this huge jump in enrollment in trade and industry programs. Just for the information of the committee and the record, I wonder if you could briefly give us some idea of what kind of project do you envision in, for instance, business and office program enrollments going from 570 in 1966 to 11,900 in 1971?

Mr. LAWSHE. Congressman, you've picked the only one that I feel competent to comment on, these being secondary school data that have been collected or devised by the secondary education division of the State department. With respect to business and office education, the information is this: Until the 1963 act, the business and office field was not legally defined as vocational education. We had business programs all over the State that were truly vocational, but were not eligible to participate in Federal vocational funds. Now, what you are really saying is this is just getting up steam. Now, the others I'm really not competent to discuss. These are not my data. I do know from personal questions that they only extrapolate existing programs and do not allow for any qualitative changes.

Mr. PUCINSKI. The interesting thing here is that out of 40,000 increase that you are estimating in the ensuing 4 or 5 years, all but 5,000 are in these new fields, and the two traditional fields of vocational education, agriculture and home economics, remain relatively static. I am hoping somewhere along the line for the information of our members, we can get someone to give a better definition of what is the nature of these increases in business and office distribution. I hope that we can.

Mr. LAWSHE. We are talking about business and distributive education, both of which relate to the service field. It is not in the production areas, but in the service areas that job expansion is going to come. Beyond that I shouldn't comment.

Mr. PUCINSKI. Your table No. 3 shows estimated manpower training requirement of 22,758, and you show an estimated enrollment of 5,700. What is the significance of these figures?

Mr. LAWSHE. Are you prepared to comment on that?

Mr. HADLEY. I have a note, Congressman Brademas. Would you like to have a copy of this report in your record? I happen to have one. These figures were taken from a table compiled in this report. What this simply says is that consultants have determined that 22,000 people could find jobs if they were trained, had the training to perform them. In the State of Indiana it suggests that Indiana Vocational Technical College attempt in its 1st year to start the training of 25 percent or 5,000. This, I think, Dr. Lawshe mentioned right here in the narrative, and it just simply says that we would undertake to train and provide programs to meet this manpower requirement.

Mr. Pucinski. That's not the sum total of the program though, is it? You've got 75,000 people who engage in vocational education programs.

Mr. Hadley. This is secondary, this is high school. We are post-high school, not a secondary school.

Mr. Pucinski. In other words then, what kind of programs do you envision?

Mr. Hadley. Well, I alluded to some of them in my prepared comments. All kinds of fields, data processing, plumbers, welders, masons, and auto mechanics.

Mr. Pucinski. Are you saying——

Mr. Hadley. Trades primarily.

Mr. Pucinski. While 22,758 could get jobs if they are properly trained in 1968, that you would be prepared to provide training for only 5,700 in that period for post-high-school?

Mr. Hadley. This data was compiled last year, latter part of last year. It simply suggested that we should undertake initially the training of 5,700. Now then, we will be limited in what we can do by the amount of money at our disposal.

Mr. Pucinski. Was this suggestion that you take 5,700 predicated on capability; is that a limitation of capability?

Mr. Hadley. It would be in the 1st year, yes, very definitely. In fact, it flatters our capability.

Mr. Pucinski. I consider this a significant figure because it shows the tremendous amount of need and assistance that both communities and States need in this field. You could provide gainful employment for other than the common laborer, in fact, even the common laborer has to have a skill. The days of the man who digs a ditch, just takes a shovel and starts to dig, are gone. Even that man has to have some training today as against what his grandfather needed 30 years ago, but this is, I think, most significant.

Mr. Hadley. It is.

Mr. Pucinski. Because it points up to me the potential. Perhaps here we see some evidence of why we have this high rate of unemployment among our young people in this country unlike any other country. As I said earlier today 27 percent of the total unemployed in this country are between the ages of 18 and 22, which is the highest single group.

Mr. Hadley. Which is the definition of post-high-school.

Mr. Pucinski. Yes, but your figures here show that even if all pegs fall in the right slots, at best you'll be able to provide training for 25 percent, rough guess, roughly 25 percent of your needs in 1968. Now, may I ask you this: Assume this legislation is passed, would the spread go up or down in 1969, 1970, and 1971?

Mr. Hadley. If this Federal legislation were passed?

Mr. Pucinski. Yes.

Mr. Hadley. Well now, quite honestly, I haven't gotten into the number proposed. I am more interested in the kinds. Insofar as Indiana is concerned, to me, the important thing now is for the general assembly to give us adequate funds in order that we will have the matching program to qualify for Federal funds.

Mr. Pucinski. Now, this legislation proposes, among other things, that we bring the matching formula down from 25 to 10 percent. We are going to have considerable flagging on this in Congress. I am sure the Budget is going to scream loud and clear. My own thinking is that the matching provision of many of these bills really keeps many of the States from this program. Now, either we are going to help these States or we are not going to help them. While I am a great supporter of the help effort, I think in the specialized fields it seems to me that lesser matching requirement that we provide, the more successful are these programs at the State level, the local level. Is that a reasonable statement?

Mr. Hadley. Well now, I want to make sure of which way we are going. Is this a smaller amount of Federal funds?

Mr. Pucinski. No, no. Smaller amount of non-Federal funds—now you have to provide 25 percent. We are proposing in this legislation that you will only have to provide 10 percent in order to give you a chance to participate. We know that your own capability are reasonably fixed, so in order to take full advantage of the increased programming here, we are recommending that you be required to match less of your money in order to come into this program.

Mr. Hadley. For a dollar of our money we get $9 of yours. Obviously, that incentive is important, and I believe ought to attract more development of more programs at the local level. On the other hand, I've heard some say that one of the programs that has run up a red flag at the local level, city and State level is the programs that started out at 10, then we were back to 25, then back to 50. What are we getting ourselves in for?

Mr. Pucinski. This is correct. We are going the other way. The final question is here you have a deficit of 17,000 jobs available that will not be filled simply because you don't have the capability to train them and obviously you don't have the money.

Mr. Hadley. Right.

Mr. Pusinski. Now, I am hopeful that this will indicate a renaissance of the acceptability of vocational education; nearly all witnesses who have been heard have said that vocational education is a stepchild. Mr. Lawshe said this in his statement. Now, can we look forward to local school boards reorienting their sights, and instead of local school boards treating vocational education as a stepchild, can we look to the local boards to reshuffle some of their expenditures to meet the need of this deficit that you talk about?

What is the ultimate goal of education? The ultimate goal of education, I would think, is to help an individual take his place in society, provide for his family, all the other things he wants to do. When we talk about a 17,000 deficit in 1968, we at the Federal level are trying to do everything we can in our power.

Do you think the time will come when local school boards will take a better look at the budget to redirect some of their funds?

Mr. Hadley. You struck at one of the real basic problems in the

State of Indiana, and it is one of the reasons for creation of the institution that I represent, and it is because post-high-school vocation education, the range of the deficit is exclusively in the hands of the local school boards. This means that the cost has to be borne by the real estate and personal property tax. That is the most unpopular tax in the State of Indiana.

Mr. PUCINSKI. And in Illinois.

Mr. HADLEY. Our money now comes through State taxes. When we begin to operate a program right here in South Bend, the extent of the local school corporation to provide for such post-high-school is shifting.

Currently we are thinking 7 cents per $100 of assessed values will be shifted from local property taxes. The State of Indiana is trying to provide the same incentive, so to speak, for local communities that the Federal Government is trying to provide at the State level.

Mr. LAWSHE. I would like to respond to that question. I want to keep the discussion within the secondary school category. Congressman, a lot of the problems Mr. Hadley has to deal with are problems that were self-generated because as a State we didn't do what we ought to have done at the secondary level. We have a gross training deficit here. I have to think somewhat separately about secondary schools in metropolitan areas and secondary schools in what we have normally thought of as rural areas. Now, in the metropolitan areas, all of the problems of the city and of urbanization and all of this sort of thing have all a sobering effect on all manners of things. Our city school boards are becoming increasingly serious about them. The other end of the stick in Indiana—Congressman Brademas knows about this—we've been undergoing a massive administrative reorganization in the consolidation of units which were economically far too small, and I think we have cut the number of school corporations in half in the past 10 to 12 years.

I once was principal of a school that had 320 kids in 12 grades. Now, it is not possible for a school that size to make any intelligent approaches to vocational education on the secondary level. I think the mere fact that the State Department of Public Instruction had thirty-some proposals from secondary schools for vocational construction is significant; this is in effect a renaissance.

Mr. PUCINSKI. I say that would be true. I am sure that this community and this State certainly owes the gentleman presiding here, Mr. Brademas, a tremendous debt of gratitude. It's really through his efforts in 1963 that a breakthrough has been made, and what he said was not exaggerated. Thank God we have men like Mr. Brademas around to see to this. I am delighted. I think your testimony to these figures today certainly fortifies more than anything else the need for this legislation. More important, the renoissance is coming back. There are 22,000 kids that can get jobs instead of being unemployed.

Mr. LAWSHE. When you look at table 3, you've got to keep in mind that up until IVTC was credited, this State had virtually no mechanism whatsoever for training persons who were high school dropouts, or who graduated from high school. We are dealing first with a backlog. You say 5,000, 5,700. It isn't that small a number.

Mr. HADLEY. Put two figures on that sheet you have there. Right below 22,758 put 53,000, and under 5,710 put 27,500. That is the forecast for 1976, 1977.

Mr. **Pucinski**. So even in 1977 with the renaissance and everything else we're still going to be 5 percent short.

Mr. **Hadley**. It could be. However, it is assumed that there will be other agencies. We are not going to be able to do the entire job. This is the job we will do. It also assumes that local school boards are going to be reoriented substantially in their own concepts of budget within this 10-year period. I think it assumes that this can happen if we function as we are supposed to function.

Mr. **Pucinski**. How would you recognize that we close the 50 percent gap?

Mr. **Hadley**. I suspect that there would be private schools if the demand for this kind of training continues. There will be additional schools. I think many of the gaps that remain will be supplied by Purdue University at that time. In other words, Purdue will be turning out more people into this area, and Indiana University will, and many other institutions. We are not expected to do the entire job.

Mr. **Brademas**. May I ask a question at this point, if my colleague will yield. I have been reviewing the testimony that was presented before our committee by the representatives of the American Association of Junior Colleges. They talked on some points that are perhaps relevant to our difficulty here. That in 1961 when you worked on the technical education bill as I indicated before, we found a need for semantics in respect to what we mean when we talk about vocational and technical. Straighten me out if I'm wrong. The best way to keep these two clear in our minds, to have a common language is that by technical education we mean 2-year college level, semiprofessional education, essential level education. By vocational education we mean primarily that education which is given in secondary schools, and this is not to say one is better than the other. We are talking about two different kinds of education. I was reminded by Mr. Hadley in response to Mr. Pucinski's question about how you were going to meet this gap. You are not really. Purdue and Indiana will be helping handle this. What you were really saying a number of these young people in vocational education will be funded by the Vocational Education Act, amendments to which we are now considering. While others may find their approach in the 2-year college level technical education which may be offered by technical institutes both public and private, by regional campuses of the university, and by junior colleges. Does that observation make the picture a little clearer?

Mr. **Hadley**. I am chairman of the committee here in Indiana with Dr. Lawshe and three members who are representatives of the other three State universities. We are presently working on solving the problem of semantics and what parts of the gap are the responsibilities of vocational colleges. What responsibility may be that of the State university, so that we don't duplicate the programs, so that we each understand what the other is doing exactly in their area.

Mr. **Brademas**. It could be important in determining who decides how the money is going to be spent.

Mr. **Lawshe**. I think I ought to make clear that Purdue has had 2-year technical programs since 1943. Dean McNally heads the segment of the university that operates them. One of the more recent developments is that we have 2-year nursing programs on five campuses. This is really helping the nursing problem in the State of Indiana.

Mr. **Brademas.** You get money under the 1963 Higher Education Act?

Mr. **Lawshe.** We do not. We are supporting them from State appropriations. Indiana University has recently created the Division of General Studies. They have in Fort Wayne at the moment some 2-year programs. These are primarily business and health oriented. Ours are engineering oriented. Vincennes University, as you may know, also has these programs.

Mr. **Brademas.** The only junior college in the State?

Mr. **Lawshe.** We have given support to Evansville University. We are trying to encourage 4-year institutions in the State to get into this 2-year business.

Mr. **Brademas.** I notice that this Junior College Association in respect to this part of the vocational education bill where we are talking about teacher training, all of our witnesses said where do we get vocational teachers. They say, and we feel here as in the case of innovation, by which they mean, that part of the bill which provides model and demonstration projects, funds for teacher training, should not be allocated solely through State boards of vocational education. Doesn't the contention become perhaps one of the difficulties that you were discussing earlier when you were discussing the relationship between your State board of vocational technical education and the office of the State superintendent of public instruction? I must say that, while I am in strong support, I am a militant battler for more money. I am not satisfied yet that the best way to encourage innovation in elementary and secondary, as well as vocational education, is to put out money from Uncle Sam in the one single source.

Mr. **Lawshe.** Only that I couldn't agree with you more.

Mr. **Brademas.** That is a hot fight in title 3 with respect to the Elementary and Secondary Education Act.

Mr. **Lawshe.** I might say to you that Vincennes University, the only junior college in the State of Indiana, came to the State board of vocational technical education within the last year and asked to participate in the vocational teacher training effort. The board turned them down. The board turned them down because there was so much opposition from traditional vocational education people who were in the saddle vocationally speaking. This is saying "you can't do it because we've never done it." Nothing would tickle me more than to see some kind of mechanism whereby somebody could reach up and shake the bush once in a while. You might find it doesn't take 4 years to train a teacher.

Mr. **Pucinski.** What would you then find?

Mr. **Lawshe.** That is because of where you spent your summers when you were a young boy.

Mr. **Brademas.** By that, Congressman Pucinski, he means down in Grant County, Ind., where my mother was born.

Mr. **Pucinski.** In view of what you say, finding a strong objection to adding to the section dealing with fellowships and exchange programs as we have now, the commissioner is authorized to make grants to State boards to pay the costs of carrying out cooperative arrangements and so on and so forth. Does anybody find any real strong objection to adding "or local educational agency" which would give the commissioner the right to make State boards or local boards pay the cost of this. Perhaps there is merit to suggest that this would make these people realize the good they can do. You have no objection to that?

Mr. LAWSHE. No.

Mr. BRADEMAS. Mr. Hadley, I was just talking to Harlan Noel who may I say I am glad is here in South Bend and is an old personal friend of mine. He tells me that Dallas Sells, the president of the Indiana AFL, who was scheduled to testify at this point, will not be able to be here, but Mr. Noel has his statement which we will put into the record. I take this time to note that Mr. Sells makes the statement that there is a tremendous need for the rapid expansion in vocational technical education in Indiana. He says the provisions of this bill will provide the tools for improved Federal-State cooperation in meeting these needs, and goes on to urge support for this legislation. In view of the fact that Mr. Sells isn't here, and secondly the fact that Mr. Hadley has been engaged in colloquy with us, I am going to suggest that we ask Mr. Hadley to testify at this point. When he is finished, if Mr. Noel has any observation——

Mr. NOEL. The only observation I'd like to make, I don't know what happened to Dallas, because yesterday afternoon he indicated to me that he was going to be here. This morning I received this statement. He asked me to deliver it to you.

(The prepared statement of Dallas Sells follows:)

PREPARED STATEMENT OF DALLAS SELLS, PRESIDENT, INDIANA STATE AFL–CIO

Mr. Chairman and Committee Members, it is a privilege for me to appear before this committee on behalf of vocational education.

In 1966 approximately 70,000 students were graduated by public, private and independent schools in Indiana. Thirty-eight percent of these, or about 27,000 of these students plan to enter a profession requiring a college or university degree. The remainder of the graduates either were planning for post-high school or technical education or some other part time education after graduation.

Some 47,000 students, according to a recent survey, were interested in enrollment in vocational-technical curricula only if the programs were available in their community. Thus, we hoosiers can demonstrate a real need for resources to expand vocational education in our state.

The provisions of HR 8456 would provide tools to help meet the vocational education needs in Indiana. For example, the Indiana Vocational-Technical College created for non-high school, non-academic, vocational-technical training is now in the process of creating programs designed to do many things under the proposed bill such as:

—Familiarizing students with the broad range of skilled occupations,

—Projects designed to broaden or improve vocational education curricula.

I.V.T.C. created in 1963 would be a logical agency for the implementation of the provisions in HR 8456. Additional provisions of HR 8671 also relate to programs being developed by I.V.T.C.

Section 4(a) of the bill provides a separate authorization for a work study program which is an area in which the leaders of vocational education in Indiana feel could be expanded greatly.

Provision is also made for residential vocational education school programs. I.V.T.C. has been considering for some time the possibility of such residential programs in areas such as electrical transmission linemen and for the training of heavy duty earth moving equipment. Support as is envisioned in HR 8671 could possibly be the vehicle by which such planning becomes a reality.

Section 6 of the bill recognizes the need for strengthening the quality of vocational educational instruction.

In short, Mr. Chairman, there is a demonstrated need for rapid expansion of vocational-technical education in Indiana. The Indiana General Assembly has created a structure to help implement those needs. The provisions of HR 8671 and HR 8456 could provide the tools for Federal-state cooperation in meeting the requirements of our hoosier citizens and we urge your support for passage of such legislation.

STATEMENT OF FREDERICK M. HADLEY, PRESIDENT, INDIANA VOCATIONAL-TECHNICAL COLLEGE

Mr. **Hadley.** My first note, Congressman, is to bring greetings from Mr. Robert Riley who is in Las Vegas attending the meeting sponsored by HEW.

Mr. **Pucinski.** In Las Vegas?

Mr. **Hadley.** In Las Vegas.

Mr. **Brademas.** I might say for the benefit of Congressman Pucinski that Mr. Riley is vice president of the Indiana Vocational-Technical College, and was the predecessor of Mr. Wysong in charge of adult and vocational programs in South Bend. Mr. Riley has been a key figure in the success of our local training programs and I want in particular to pay tribute to him for his work in getting our manpower training going after Studebaker shut down.

Mr. **Hadley.** I am appearing before your subcommittee in my present capacity as president of the Indiana Vocational Technical College. While the Indiana Vocational Technical College in its present form was created by the Indiana General Assembly in 1965, it has been functional for slightly more than 1 year. It is financed by State taxes, such Federal grants as it might qualify for, and by student fees. Its purpose is to provide vocational and technical, nonacademic educational opportunities for post-high-school citizens of Indiana. By definition there are included high school dropouts, high school graduates, and all other adults interested in the programs offered by the college. A wide range of programs in technology, industrial and service trades, and apprenticeship programs are offered. These include such courses as air-conditioning service, drafting technology, computer technology, appliance repair, welding, carpentry, plumbing, and many others.

It is our belief that education in grades 1 through 12 should essentially be preparatory to career training. Here are two definitions of that kind of education: (1) "It is a great end of education to raise us above the vulgar." Richard Steele, 1709. (2) "I call a complete and generous education that which fits a man to perform justly, skillfully, and magnanimously all the offices, both private and public, of peace and war." John Milton, 1644.

Basically we believe that vocational programs in grades 1 through 12 are import instruments of a comprehensive education.

While the institution with which I am connected is called a college it is in fact an institution whose responsibility is to provide post-high-school occupational training. Accordingly we believe that vocational and technical programs at the post-high-school level are instruments of occupational training rather than instruments of comprehensive education. Our motto is "To match job opportunities with job skills."

Of the more than 250,000 students enrolled in Indiana high schools, less than 15 percent will earn a baccalaureate college degree. What are the educational and/or training opportunities for the 215,000 who fail to achieve this goal? The question of semantics rears its ugly head in almost any problem we face. Our institution is called a college as though to call it a college would automatically increase the stature and dignity of becoming a plumber. We no longer have a course in cooking but we do have programs in the culinary arts. You will find in your packet a brochure describing a course entitled "Peripheral Equipment Operator." Most of us would have to read the fine print to discover what this is all about. Actually this is a training program in the use of mechanical equipment which may be required in data processing. We might be more honest with ourselves if the legislation in which we are interested today spoke of occupational training instead of vocational education.

I now wish to address myself to the following paragraphs from H.R. 8671, and I quote from page 4 (B): "Establishing, operating, or evaluating, exemplary and innovative vocational education programs or projects designed to broaden occupational aspirations and opportunities for youths, with special emphasis given to youths who have academic, socioeconomic, or other handicaps, which programs or projects may among others include—"

There can be no more laudable objective than providing incentive for innovation. However, I am concerned with the predilection that Americans seem to have for lavishing their major attentions on either our inferior citizens or our superior citizens. Are all of the 215,000 high school students referred to above to be regarded as inferior because they failed to get a college degree? I should hope that sometime legislation in the field of education will be designed to give "special emphasis" to those who are average.

Page 5 (II): "Programs or projects for students providing educational experiences through work." Recently I spent a night in the Enalc Hotel which is about a 15-minute drive from the Rome airport. It is located on the western seashore of Italy. It is a fine hotel of 50 or 60 rooms. It was interesting to discover that the hotel was in fact a school. Young people serving as waiters, janitors, cooks, maids, receptionists, bellboys, and so forth were students. The entire cost is borne by the state. A young student from Brooklyn told me—noncitizens of Italy pay $85 a month for room and board and tuition for a 2-year course—that he had learned more in 4 months about his future occupation than he had learned in a full year at the Cornell School in hotel management. There are 14 similar installations in Italy. I would like to see a dozen of them scattered around the State of Indiana. Some might be operated in conjunction with State parks. One could envisage similar programs in, for example, auto mechanics and the building trades.

And again referring to page 5 (III): "Programs or projects for intensive occupational guidance and counseling during the last years of school and for initial job placement."

One of the most serious problems in the State of Indiana is the counseling of high school seniors who do not intend to continue on to college. About all a counselor can say is "go get a job." We are hopeful that in the not too distant future these counselors will tell these seniors: "I recommend that you investigate programs offered by the Indiana Vocational Technical College, the only institution of its kind in the United States." We believe that the best counseling in this area can be provided by individuals who have had experience in industry and commerce. It would be exciting to see a program developed under which employers could be reimbursed while qualified employees on their staff are loaned for counseling purposes.

Page 5 (IV): "Programs or projects designed to broaden or improve vocational education curriculums." In most instances secondary schools do not provide occupational training of such a nature that qualified its graduates to seek employment at a skill level of which the graduates are capable. This is largely because of inadequate curriculum. Much cooperative work needs to be done with prospective employers in devising the course content of occupational training programs.

I think the proposed amendment to the Vocational Education Act of 1963 have much merit. I regret that time has not permitted a more thorough study.

Mr. **Brademas.** Thank you very much, Mr. Hadley. I just have one question because we questioned you earlier with Mr. Lawshe. I take it that although Ivy Tech is a postsecondary institution, the fact that, as you state in your testimony, you are quite consciously nonacademic means that you do not seek to qualify for Federal funds under the Higher Education Act, but rather to draw on the Vocational Education Act?

Mr. **Hadley.** That is correct.

Mr. **Brademas.** This is very helpful to me in trying to understand because I sometimes have the feeling that some institutions believe that Congress seeks in some unfair way to discriminate in favor of one institution as against another. If, however, there were a clear picture of the way in which different institutions saw themselves, then we could agree that we need all kinds of educational institutions.

Mr. **Hadley.** That's right. The great genius of American education is the diversity.

Mr. **Brademas.** I notice also in junior college testimony that a solution is made to area schools, area vocational schools, and in a study entitled "Educating for Work," a report, I'm not familiar with this 1967, the note indicates that the secondary school has raised with the area vocational school approach. Do I take it Ivy Tech is an institution which is in quite the same thing that area vocational school represented in legislation we are discussing?

Mr. **Hadley.** The State board has, I believe, gone on record as to their purposes. Regional institute of Ivy Tech is identified as an area vocational school. Now, in Indiana you may be familiar, I think we have only one such school in Versailles, Ind. That was commenced by a dozen counties in an area long before. They are actually an area vocational school. We have a contract with that institution by which we fund that portion of their program that is devoted to post-high-school and adult education. The bulk of their program is secondary, because they have kids in from around the hills, farm areas. They have about a hundred in daytime post-high-school programs such as I referred to in the testimony.

Mr. **Brademas.** Mr. Pucinski.

Mr. **Pucinski.** I certainly want to commend you for the excellent statement you made to the committee, and I am inclined to agree with your apprehension about the language in this bill providing special emphasis on socioeconomic and other handicaps. We are now spending almost a billion dollars in title I, ESEA, which is designed primarily for youngsters in groups that have been defined here. I think there is a lot of merit to what you say, and that the average person is wondering what happened.

The million Americans now interested enough in the implementation of FEPC and the various other legislation that we passed in this country, and—I don't think that most Americans are aware of this—have been responsible for a fantastic development in the last 6 or 7 years. We have for the first time created a million dollar income in Negro society, in this country.

So very often language such as we have here is couched in such a way as to bring assistance to one part of the community without spelling it out. I think if this language were more specific, I think you would get an awful lot of peope in this country from all walks of life, all races, all economic forces, involved in this program. I think you made a good point. Certainly I think the committee will want to discuss this more.

Mr. **Hadley.** I'm motivated in making this by consideration of this sort. We've talked about vocational education as a stepchild. I don't want it to be a stepchild. I want it to be more important. We are interested in anybody that wants to get into this kind of education.

Mr. **Pucinski.** You have made quite a few recommendations. I wonder, my colleague from Indiana, if you would take a copy of the bill, and try to translate your recommendations into actual language in the form of a prepared amount. I would like to see what you can do with the language of the legislation. Some of this is recommended by the agency in Washington, and sometimes I can't identify them when they get through with it. So it would be good to see what you can do with languaging the recommendations you have made and what funds you believe would be necessary. Let's take a look at it, and just see how you see some of these changes, what you think they'll look like when they reach the State and the schools.

Mr. **Hadley.** Certainly.

Mr. **Lawshe.** I would not want, by omission, to create a wrong impression. The type that Mr. Hadley is speaking of qualifies as area vocational schools. It does not follow, however, that under certain circumstances, arrangements with the public schools do not also qualify as area vocational schools.

Mr. **Brademas.** I understand.

Mr. **Hadley.** One other comment. I don't mind identifying this, its RCA, that at the time of the inquiry RCA had a very large series of operations in the State of Indiana. They were looking for 10 graduate engineers. This would be the kind of people that come from Purdue. To support each one of the 10 engineers they feel that they would need six technicians to fully capitalize on the engineers. I could envisage their recruiters going to Purdue for 10 engineers, come to IV Tech and get 60 technicians, hopefully.

I have been talking about the average guy, and I just have to put this story to you. A man was seen standing with one foot in a tub of boiling water, the other foot in a bucket of ice, and someone said, "On the average, he should be comfortable.

Mr. **Pucinski.** I have one further particular question, because the other witnesses have been patient. The suggestion was made yesterday by the president of the Teachers Federation of the Chicago Teachers Union that teachers in purely vocational classes—we ought to give serious thought to lowering the academic requirement and giving them substantial credit for getting bona fide actual experience. Because we have the vice president of Purdue University here, I want to get his own thinking on this, whether there is any merit in that suggestion.

Mr. Lawshe. That is a matter of State certification. In the State of Indiana, there are two ways to become vocational teachers: One is to attend a teacher training institution which the State board designates to prepare teachers in agricultural trade, industrial or what have you. This manner of preparation parallels the preparation of the history or other subject matter teacher with the exception that there must be a demonstration of trade or occupational competence in addition. The other is addition to that Indiana has special vocational licenses. We take a man right out of the sheet metal shop, for example, and with a 12-hour teacher training quickie, put him into a teaching situation, and then the teacher training institution follows up with an upgrading type of instruction.

Mr. Pucinski. You feel then we would be wise to leave this within the States?

Mr. Lawshe. I would say if the States follow Indiana's plan, "yes."

Mr. Hadley. I think that one of the new programs indicated at Indiana Technical College is this: We do not qualify our instructors in teacher certification. We have already adopted the program. The first requirement shall be high school, next, the ordinary ability to teach.

Mr. Wysong. The high school can't avail themselves of the tradesman with the 12-hour license for the simple reason he can only teach in vocational skills. He can get on our industrial arts, of course. He must teach in the vocational skill at all times. It takes a real large school in order to be able to do this. So even in South Bend we are unable to do it.

Mr. Brademas. Thank you very much, Mr. Lawshe, Mr. Hadley, and Mr. Wysong. We have two more witnesses this afternoon. I don't see Mr. Beaudway.

We will first call on A. K. Smith, the Superintendent of Schools in Michigan City. Mr. Smith, please proceed.

STATEMENT OF ARA K. SMITH, SUPERINTENDENT, MICHIGAN CITY AREA SCHOOLS

Mr. Smith. I am the Superintendent of the Michigan City Area Schools, a member of the Teacher Training and Licensing Commission of the State Board of Education and the Chairman of the Superintendent Association's Vocational Education Committee. Much of what I say comes out of experience in all these positions of responsibility.

We note that in secondary education advance standing has been accomplished in English classes. High school pupils do in high school science classes now what was done in sophomore college classes a few years ago. Calculus, a subject studied in the junior class in college 40 years ago, is now offered in high school. Fluency in foreign language is at the level in the high school that wasn't accomplished in colleges a few years ago.

The question is why do we retrain people in vocational education in high school? We can achieve if we put the same effort, like results in the vocational education field, the same advancement that has been enjoyed in these other fields. Vocational education pupils can get advanced standing in their apprenticeship and/or technical college programs I am sure, as a result of their high school experience. Having gained advanced standing in the apprenticeship status they can achieve much greater efficiency by the time they are out of the apprenticeship program.

Vocational education students in high school should be able to get into advance standing when entering a technical institute. Having the advanced standing, they can make further progress in the 2 years ahead of them than they would otherwise. Many of them can accept a job in many of the skilled trades after the apprenticeship or technical institute training.

My next point would be my high enthusiasm for the fellowship and training program of vocational education teachers. As we stand now there are several types of teachers who can take advantage of this program. If vocational education is enhanced the ranks of the so-called industrial arts teacher will produce some vocational education teachers. These industrial arts teachers are fine candidates for the program of teacher education in vocational education.

Another source would be to pick up skilled workers from industry. They have no need for the "what" to teach, but I am saying to you that they have considerable need for the "how" to teach the methods. This is not only in the classroom, but in guidance work, extra curricular supervisory work, et cetera. They need help in the lesson plan preparation. They need to have an educators' point of view if they're to help these children. We have had some experience with rapidly converted teachers who weren't accustomed to the kind of language to be used in school. They need orientation.

I might draw from ball playing. You don't always pick the person who was the best player to become manager of the team. The man who becomes manager has some of the other skills.

We do need this kind of program, the shuttling in and out from industry over to teaching, which I think your bill would provide for. Then, veteran vocational teachers will have the opportunity to go back to become familiar with new developments, new methods, and actual familiarization with the newer equipment. If they haven't asked the superintendent for the best kind and most recent, modern type of equipment, they didn't ask him because they didn't know about it. The superintendent is not in the position of upgrading the operation. The veteran vocational teachers certainly need to go back into industry not only to know new methods but also new equipment. I would push wholeheartedly for the fellowship and exchange, the division of subsistance to pay for all of these in three categories.

In the vocational and guidance counseling provisions of your bill, I think that we need to be careful here not to paint some counselors with one brush, vocational counselors with another. The counselor is supposed to help the student arrive at the place where he can take a full and intelligent view of his situation to the point he can make correct decisions in the high school. This includes the vocational counselors. The vocational counselor cannot be content to issue reams of mimeographed materials, holding discussions with, and lectures to, the students, but they do need to have this information in Michigan City.

We have verticalized our counseling staff. Heretofore, four counselors had a certain number of students hetrogeneous in character throughout the school, alphabetically or some other arrangement. Counselors tend to be mother hens to students who were college bound. They should provide guidance to all pupils. There is some counselor self-identification with college students. The vocational student got very little counseling. We verticalized it by giving each curriculum its quota of counselors. There are certain counselors for the college bound; other counselors for those entering commerce, and then there are a certain number for those entering vocational education.

The vocational counselor visits local corporations. He frequently visits personnel offices. He is constantly meeting with the foremen. He keeps in touch with the heads of industry, with the needs, as analyzed by chambers of commerce, and he relates this to the boy or the girl and helps them transfer from school to job, and I am glad to see that your bill provides financing for this kind of program. I don't know whether, because we are already involved in vocational counseling, we will be eligible for this help; but, whether this is true or not, we're going ahead.

The work-study program has been going on in private industry in co-op study. We have had this in Michigan City since 1957, but these are profitmaking institutions we are dealing with. Now, you have to detail this and get work for boys and girls as you prescribed in your bill in nonprofit institutions for certain eligible boys and girls. This I approve of. I am wonderng if some provision might be made at the administrative level to provide some of the costs of this operation. Here the pay goes directly to the student. It seems to me this cost might be supported.

The area of vocational schools is of great interest to me, and let me say I have been in complete support of Dean Lawshe, and the Indiana Vocational-Technical College programs. I think Indiana badly needs them. The quicker we get going full strength, the better. I would say the dropout problem is great where the youth lives in areas of population sparsity. It is necessary to draw from a wider area in order to get sufficient demands for these courses. I think the Indiana Vocational and Technical College Board will organize programs in these areas.

I think residency in area vocational schools is good for a certain part of the students, but I think a guide could be laid down in Indiana to have these institutions, area vocational schools, sufficiently close to each other to bus transport students for half-day enrollments at these institutions and bus transport them back to their own high school for the academic subjects. I believe in the integration of society. Let's don't pick these people up and put them in boarding schools away from their homes and communities altogether unless it's necessary.

Now, my reaction to the State vocational education board situation: I support the State board of vocational education. However, I went to the executive officer of this board and said, "Why can't you arrange for the legislature to put this State board of vocational technical education under the organization of the State department as a fourth commission?" I said, "The Governor appoints these people on the State vocational education board. The vocational education committee of the superintendents association would recommend to the Governor that he appoint as much of this same membership, now on the independent board, to the fourth commission within the State department of public institutes. At the present time there are interlocking situations on these three boards, the general commission, the State board of vocational education, the IV Tech Board. I think the IV Tech Board could well remain an independent identity to itself for post high school education. As things stand now, it's incorrect to call its program completely post high school. I would hope that they would begin to identify themselves for only post high school work. This would be my judgment that we could conform in the State of Indiana more closely to parallel Federal policies. The public school superintendent stands ready to cooperate with the Indiana Vocational and Technical School Education Board.

The understanding is the funds they will get will come to them from the State Department. We understand that our facilities will be used by IV Tech Board, in the evening for advanced vocational and occupational courses. In fact, the new building that the people of Michigan City started before we knew we'd get any Federal aid was estimated to cost $1,200,000. The costs went up to $2,200,000. We were given $800,000 by the State boards and I thank you, sirs, for the Federal funds involved. They alleviated what would have been a great tax burden. We're grateful. We intend to stand up and repay this obligation by cooperating closely with any and all post high school programs, and I want to express my appreciation for all that happens to us.

In a majority of cases, good students earn advanced standing in English classes. They do in high school science classes now what was done in sophomore college classes a few years ago. Calculus, a subject studied in the junior class in college 40 years ago, is now offered in high school. Foreign language, fluency gained now in the public schools, is superior to the college product of a few years ago. It can likewise be demonstrated, if opportunity is given, that high school students can and will make outstanding progress in the mastery of vocational skills while still in high school.

We are here to support H.R. 8456 because it will help to give our students the opportunities needed to prove that those who expect employment in industry and commerce should not be confined, in their high school work, to industrial arts experiences, but should have the opportunity to work with realistic equipment similar to that found in industry. In the period of apprenticeship that may follow high school graduation, or in the technical institutes where formal education may continue, the product of our high schools then will enjoy the advanced standing now earned by college-bound students when they enter the university. In many areas, the high school graduate with a good vocational education major will be able to accept a job in a skilled trade immediately after graduation.

We feel that grants to, or contracts with, State boards and local educational agencies for the purpose of stimulating or assisting in the development, establishment and operation of innovative and exemplary occupational education programs or projects is excellent. They would be designed to serve as models for use in educational programs that are badly needed. Programs which are designed to broaden occupational aspirations and opportunities for youths, with emphasis given to youths who have academic, socio-economic or other handicaps, will help keep such youth out of the ranks of the unemployed.

Such grants should support programs designed to: (1) Familiarize post-elementary school students with the broad range of occupations for which special skills are required. (2) Provide educational experiences through work-study programs. (3) Provide intensive occupational guidance and counseling for pre-graduates and post-graduates, leading to initial job placement. (4) Broaden or improve vocational education curricula.

With these innovative and exemplary programs in operation, administrators and teachers in the area will be in a position to observe good programs. This experience should stimulate all school systems to establish similar programs for their own vocational students.

An additional feature of H.R. 8671 provides compensation in cooperative work-study programs with students from low income families, where the student is employed for a public or nonprofit private agency, organization or institution. In addition to the pay to students, $35 million is authorized for carrying out the work-study program and the residential vocational school program for each of the fiscal years ending June 30, 1968, and June 30, 1969.

We are happy to learn that area vocational schools are to receive Federal financial support and that these schools are to be located in areas having substantial or disproportionate numbers of youths who have dropped out of schools or are unemployed. I am sure attention is being given to sparsely populated areas where local school enrollments would be too small to man the classes in any considerable number of trades that should be taught in a training center like this. The fact that the programs are to be geared to labor market analysis and that financial support is to supplement and not replace local funds insures continued local concern for the maintenance of an efficient program.

The need for trained and experienced vocational education teachers is great. Many teachers, now employed, are trained for and are teaching in the field of industrial arts. While this is a good foundation program, additional training is needed if these teachers are to be prepared to teach the actual vocational skills needed by those entering the world of work!

Prospective teachers must be recruited from the ranks of the presently employed master tradesmen. The training these people need differs from that for former industrial arts teachers. Tradesmen know well what it is they are to teach but stand in need of help to master the methods of teaching occupational information and skills to those who are learning the trade in an educational center.

A final group needing further training is that veteran staff of vocational teachers who need to keep up to date on new developments in their fields and in new methods being used to teach what the vocational students need to learn.

We support the provisions of H.R. 8671 wherein funds are furnished to provide fellowships for the training of vocational education teachers and administrators and persons planning to pursue such a career.

Mr. BRADEMAS. Thank you, Mr. Smith. You have come up with some very interesting observations. I am especially pleased to see your observation about the importance of close links between industry and vocational education. You have obviously developed a fine vocational training center in Michigan City. I was also struck by your idea of an area vocational school which could be attended half day by students who would then be transported back to their own schools for their academic subjects.

Mr. Smith. We will do this in our own school now for anybody from La Porte County or even the western edge of Saint Joe.

Mr. Brademas. I was also very interested in your comment about the difference of approach between vocational counselors and some of the counselors who work with college-bound youngsters. It seems to me there is wisdom in your observation. Mr. Pucinski.

Mr. Pucinski. I want to thank you, Mr. Smith, for the enlightening statement. I like the suggestion you made about using the school half time. I think that is something we will probably want to look at very carefully. Thank you very much.

(Mr. Smith's prepared statement follows:)

PREPARED STATEMENT BY ARA K. SMITH, SUPERINTENDENT, MICHIGAN CITY AREA SCHOOLS

Students in high school are making greater progress in most subject areas than ever before. In a majority of cases, good students earn advanced standing in English classes. They do in high school science classes now what was done in sophomore college classes a few years ago. Calculus, a subject studied in the junior class in college forty years ago, is now offered in high school. Foreign language, fluency gained now in the public schools, is superior to the college product of a few years ago. It can likewise be demonstrated, if opportunity is given, that high school students can and will make outstanding progress in the mastery of vocational skills while still in high school.

We are here to support H.R. 8456 because it will help to give our students the opportunities needed to prove that those who expect employment in industry and commerce should not be confined, in their high school work, to industrial arts experiences, but should have the opportunity to work with realistic equipment similar to that found in industry. In the period of apprenticeship that may follow high school graduation, or in the technical institutes where formal education may continue, the product of our high schools then will enjoy the advanced standing now earned by college-bound students when they enter the university. In many areas, the high school graduate with a good vocational education major will be able to accept a job in a skilled trade immediately after graduation.

We feel that grants to, or contracts with, State Boards and local educational agencies for the purpose of stimulating or assisting in the development, establishment and operation of innovative and exemplary occupational education programs or projects is excellent. They would be designed to serve as models for use in educational programs that are badly needed. Programs which are designed to broaden occupational aspirations and opportunities for youths, with emphasis given to youths who have academic, socio-economic or other handicaps, will help keep such youth out of the ranks of the unemployed.

Such grants should support programs designed to:

1. Familiarize post-elementary school students with the broad range of occupations for which special skills are required.
2. Provide educational experiences through work-study programs.
3. Provide intensive occupational guidance and counseling for pre-graduates and post-graduates, leading to initial job placement.
4. Broaden or improve vocational education curricula.

With these innovative and exemplary programs in operation, administrators and teachers in the area will be in a position to observe good programs. This experience should stimulate all school systems to establish similar programs for their own vocational students.

An additional feature of H.R. 8671 provides compensation in cooperative work-study arrangements with students from low income families, where the student is employed for a public or non-profit private agency, organization or institution. In addition to the pay to students, $35,000,000 is authorized for carrying out the work-study program and the residential vocational school program for each of the fiscal years ending June 30, 1968 and June 30, 1969.

We are happy to learn that area vocational schools are to receive federal financial support and that these schools are to be located in areas having substantial or disproportionate numbers of youths who have dropped out of school or are unemployed. I am sure attention is being given to sparsely populated areas where local school enrollments would be too small to man the classes in any considerable number of trades that should be taught in a training center like this. The fact that the programs are to be geared to labor market analysis and that financial support is to supplement and not replace local funds insures continued local concern for the maintenance of an efficient program.

The need for trained and experienced vocational education teachers is great. Many teachers, now employed, are trained for and are teaching in the field of industrial arts. While this is a good foundation program, additional training is needed if these teachers are to be prepared to teach the actual vocational skills needed by those entering the world of work!

Mr. **Brademas.** The last thing I want to say is that I know you are in strong support of innovative model and exemplary programs in elementary and secondary education generally. I am glad to see that your support extends over into the field of vocational education.

Our last witness is Eli Miller representing the South Bend-Mishawaka Chamber of Commerce.

STATEMENT OF ELI D. MILLER, EXECUTIVE DIRECTOR, SOUTH BEND-MISHAWAKA AREA CHAMBER OF COMMERCE

Mr. **Miller.** First of all, I am appearing not as an expert in the field of education, but primarily as one who has had many years of experience and actual working concerns with industry and the business with this region and particularly in the area of program solving. This relationship is in a moving industry and commercial business community.

I think one of the most urgent needs reflected here in this area and in all American communities today is the acute manpower and skills shortages, that all of us are concerned about in local communities all over the State.

In an attempt to offset the manpower limitations that we are confronted with, business and industry has had to turn to two directions to try to develop this manpower: One is training its own personnel and job prospects. The other is assuming the assignment through professional training of existing personnel. Both of these are costly and reflect from other very important and industrial and commercial operations. I think the industrial people are aware of one thing: The necessary skills, the new things people are going to need that business is demanding of us and will demand of us, we must develop new skills, new manpower, new people.

In this area the problem is so urgent that more than 350 industries in our area have found the solution to the manpower problem the No. 1 priority in their diversified program of work.

There are very obvious aspects to the immediate or current skill shortages. I don't think we have to delve into those too much. However, from the future standpoint, I think it is mandatory to understand the new skill shortages.

Anyone who has anything to do with vocational training, I think they are very specific. First of all, it is very obvious that business and industry feels that there should be more local community evaluation of required skills and technological changes. I think we are trying to solve, without the knowledge of what these changes are demanding of the skills and what the job skills really entail. Then there should be in the opinion of the business communication, prerequisites for careers in the skilled trades.

It seems to be here that job positions and the realm of operations needs cooperative education, intermingling education in the vocations on the jobs, and this, I think is a very outstanding aspect of vocational training program both at the high school and college level. I think they should be strengthened and expanded.

It was interesting to learn that Bethel College in South Bend is thinking very seriously of entering into a cooperative type of program on the college level. I think Indiana University is contemplating such a program, and this is a very interesting development.

I think on the local school level more administrators could take the attitude that Michigan City has taken, that they should take vocational training out of the old school shop and improve it on proper techniques and proper equipment and extend the community problems through the whole school corporation.

I think also there is a very serious need for vocational education to assume the local communities function. I mean that local school corporations have been training people in various programs in the communities for jobs that didn't exist in the community agency. An example here, years ago we used to have rather active programs in woodworking. This is obviously not a woodworking community. It is a metal trades community. I think we must make our training facilities specific. I think we have broken through in this community in very definite strides.

I think there is need in many communities throughout the Nation. I think there should be emphasis placed on enrollment of qualified students in the vocational skills. I think the government in the past and cities and counties and States has expended a lot of effort trying to train people who just couldn't be trained. I think if we go into high-geared type of vocation, somehow, somewhere along the line the testing program would probably save a lot of time and lot of money.

One of the areas that we have been very concerned about has been the high school counseling problem or school counseling problem that has been mentioned here before. This is primarily academic. We feel there is a very serious need for counseling strongly oriented to immediate vocational needs. There is a very strong need to balance the academic with the vocational. I don't think they should be painted with a different brush either, but I think there should be balance in this. Vocational teachers often tell you this too.

I have cited in the official testimony that out of 100 students starting first grade, only 75 graduate, 37 enter college, and 18 graduate from college. Additional research on dropouts, 593 during the 1964–65 school year showed 7.2 percent found positions in industrial arts, 11.9 in commercial programs, and 0.6 in the agricultural programs, while almost 66 percent were in general educational programs. And here, of course, the obvious is that 65.4 percent should have been prepared for vocations with proper guidance.

Local communities, State government, and the Federal Government must enter into grant programs which will develop local vocational training programs which are designed to meet immediate skill needs and long-range future needs. In connection with such special programs, they should, of course, establish programing on a sound, factual, and realistic basis.

A good example of this local community-State-Federal government cooperation is the Ivy Tech program, which has been discussed here, and we're very proud in South Bend, is going to such a regional scale. Business and industrial leadership feels that the Tech College program can contribute immeasurable to the present and future manpower needs. It is important that the administration be properly guided and directed. However, without the government's financial support, I don't think it should be undertaken. We were adamant for supporting the legislature this year to make sure Ivy Tech is properly funded.

I believe that every observation we've made in some way relates not only to the State and local administration, but the vocational technical school and Federal Government and must apply to bring the growth of it.

Mr. Brademas. Thank you very much, Mr. Miller, for your excellent statement. I would like to congratulate the Industrial Council of the South Bend-Mishawaka Area Chamber of Commerce, the industrial leadership in this community generally, on your strong support of vocational and manpower training programs. I think your support can make a great deal of difference in the effectiveness of these projects.

The other observation I would like to make is that although it has really not been many years since the shutdown of the Studebaker plant, when we had so many unemployed workers in our community, we are now in a position where we have a shortage of skilled working men and where we have to be concerned about adequate facilities for training more men in job skills. I think these facts are an indication of the remarkable economic comeback in the South Bend community.

Mr. Pucinski. Mr. Miller, I think you've made a very impressive statement that the chamber of commerce here would support H.R. 8456 and H.R. 8671.

I wonder if we could ask you to communicate with the national Chamber of Commerce. They have not yet testified on this legislation in Washington. They will be invited, of course, to testify. I am sure that it will be very helpful if your local chamber would let the parent organization know your feeling on this legislation.

Mr. Miller. We don't always agree with them.

Mr. Pucinski. I know but it would help us to know. Thank you very much.

(Mr. Miller's prepared statement follows:)

Statement of Eli D. Miller, Executive Director, the Industrial Council, South Bend-Mishawaka Area Chamber of Commerce

The most urgent problem confronting all business and industry in American communities today is the *acute manpower and skills shortage.*

In an attempt to off-set the manpower limitations, industry has had to assume the costly assignment of training its own personnel and job prospects, or to undertake even costlier methods through professional training of existing personnel. This, however, does not represent the answer to the problem wholly since the future must project into manpower pools *new skills* and *new people* to fill jobs which our business and industrial technology will demand.

The problem is so urgent that more than 350 industries in the membership of the Industrial Council of South Bend-Mishawaka Area Chamber of Commerce have delegated the solution to the manpower problem the No. 1 priority in their diversified program of work.

The immediate aspects of the skills shortages are obvious. The future projects an accelerated concern * * * making it mandatory that communities, manpower development agencies, civic organizations, school corporations, and government, place new emphasis in manpower training and vocational education.

There are several significant areas to the manpower problem:

1. More local community evaluation must be made of required skills and technological changes. The communication of prerequisites for careers in the skilled trades must be stepped up.

2. Cooperative education programs, inter-mingling education in the vocations with on-the-job experience * * * both at the high school and the college level * * * must be strengthened and expanded.

3. Present-day school vocational training programs in the local community must be taken out of the school shop atmosphere of the by-gone area * * * and they must be improved, properly equipped, and expanded.

4. Vocational education must assume a "local community" function. Job prospects and students must be trained to fill specific jobs which exist or will be created in the local community.

5. More emphasis must be placed in the enrollment of *qualified* students in the vocational skills. Initial enrollment tests can determine quickly the desirability of expending time and money to train students in vocational skills.

6. High schools and educational leaders are placing more emphasis on "academic" counseling strongly oriented to immediate vocational needs of the majority of students * * * and to provide balance in the counseling program.

For example, in South Bend, studies show that for every 100 students starting first grade, only 75 graduate from high school, 37 enter college, and 18 graduate from college. Additional research on 593 dropouts during the 1964–65 school year showed only 7.2 per cent in industrial arts programs, 11.9 per cent in commercial programs, and .6 per cent in agriculture programs, while 65.4 per cent were in general educational programs. The 65.4 per cent should have prepared for a vocation with proper guidance emphasis.

7. Local communities, state government, and the federal government, must enter in to grant programs which will develop *local* vocational training programs, as well as *Regional schools* * * * designed to meet immediate skill needs * * * and future needs. In connection with such special programs, local communities or regions must research their long-range manpower and skills needs, and establish programming on a sound factual and realistic basis.

A good example of this local community-state-federal government cooperation is the Indiana Vocational Technical College program of the State of Indiana. South Bend will be the site of the first Regional Tech College of IVTC. The business and industrial leadership of the Metropolitan South Bend Region feels that the Tech College program can contribute immeasurably to the present and future manpower needs of the highly industrialized metropolis. However, if such programs are to suffer from lack of support and financial assistance, they should not be started.

Any participation that government can render in the aforementioned areas relating to vocational education can go a long way toward meeting the severe manpower and skills outlook. Without people * * * without skills * * * without skills to build the productive capacity of business and industry * * * our nation will be severely handicapped.

FACT SHEET ON VOCATIONAL EDUCATION IN THE STATE OF INDIANA

A) TOTAL EXPENDITURES FOR VOCATIONAL EDUCATION AND TRAINING (fed., state, local)
  FY 1966—$16,000,000.00

B) FEDERAL GRANTS FOR VOCATIONAL EDUCATION
  FY 1966—$6,183,872.00
  est. FY 1967—$6,788,130.00
  under H.R. 8671—est. FY 1969—$12,000,000.00

C) FEDERAL GRANTS UNDER VOCATIONAL EDUCATION ACT OF 1963 ONLY
  FY 1966—$3,938,841.00
  est. FY 1967—$4,907,895.00

D) FEDERAL FRANTS FOR CONSTRUCTION, ADDITION, AND RENOVATION
  FY 1965 & 66—$5,000,000.00

E) NUMBER OF SCHOOLS RECEIVING FEDERAL FUNDS
  FY 1966—300

F) NUMBER OF TEACHERS IN VOCATIONAL EDUCATION
  FY 1966—2,255

G) ENROLLMENT IN VOCATIONAL EDUCATION AND TRAINING—FY 1966

Total—78,507

Agric.	17,852
Dist.	2,465
Health	934
Home Ec.	39,603
Office	205
Tech.	3,653
Trades & Ind.	13,794

Mr. BRADEMAS. I want to thank you, Mr. Miller. I would like to thank all of the witnesses, especially Mr. Wysong, for helping to organize these hearings. They have been extraordinarily helpful to Congressman Pucinski and me. We appreciate it.

I want to thank Mr. Pucinski for coming all the way over from Chicago and out from Washington to be here. We're honored to have him.

Mr. PUCINSKI. I just have a footnote, Mr. Chairman, This has been tremendously impressive hearing, and I want to congratulate you for the excellent witnesses which you presented to us for the evaluation of this legislation.

Mr. BRADEMAS. Thank you very much. The subcommittee is adjourned.

(Whereupon, at 4:30 p.m., the subcommittee adjourned, to reconvene at the call of the Chair.)

(The following statement was submitted for the record:)

STATEMENT BY JAMES E. BEAUDWAY, PRESIDENT, INDUSTRIAL METAL-FAB, INC., SOUTH BEND, IND.

As President of the Industrial Council of the South Bend-Mishawaka Area Chamber of Commerce, I have had the first-hand opportunity to discuss current and future business problems and concern areas with a great majority of the industrial leadership of the South Bend Metropolitan Region, and the State of Indiana.

From an operating standpoint, one topic—MANPOWER—is singled out by industrial leaders for top priority ranking among problems that must be resolved if economic development efforts in our local communities are to render concrete evidence of progress.

The problem of meeting the manpower needs of business and industry has immediate and long-range implications. The challenge of this problem must * * * by necessity * * * involve the local community, our educational systems, and government at local, state, and federal levels.

From a community standpoint, every business and civic agency must become directly involved in contributing to the solution of the nation's severe manpower and skills shortages.

Our educational systems must re-evaluate their present programs in vocational education, and apply more emphasis to organized school efforts to properly and effectively counsel our young people in vocational skills.

Because of the magnitude of the manpower problem, the Federal Government must enter into the picture * * * not to directly administer programing of vocational and technical nature * * * but to offer assistance and financial grants that will permit state educational agencies and local communities to initiate training programs that will develop new manpower sources for business at the local or regional level.

Everyone who has a stake in the manpower future of our nation must accelerate effort to the solution of the problem. Programs initiated by the federal government which encourage vocational education at all levels must be continued. They cannot be curtailed * * * if the programing meets local and state needs * * * and if they involve citizen participation.

APPENDIX

American Federation of Labor and
Congress of Industrial Organizations,
Washington, D.C., August 8, 1967.

Hon. Roman Pucinski,
Chairman, General Subcommittee on Education, House Education and Labor Committee, Washington, D.C.

Dear Chairman Pucinski: The AFL–CIO is pleased to endorse the Exemplary and Innovative Programs or Projects in Vocational Education bill H.R. 8525.

We are convinced that the Vocational Education Act of 1963 has established its mark on the growth of vocational education and training. Experience with this Act clearly indicates the benefits to be gained by strengthening the present legislation.

Your subcommittee already has received statistics and statements substantiating the performance of the 1963 Act. In addition, as you know, the National Advisory Council on Vocational Education now is undertaking an in-depth evaluation of the program and will report to the President and the Congress before January 1, 1968.

While the AFL–CIO is convinced that this report will be of great value, we are equally convinced that progress in vocational education is so important to our nation that we cannot afford further delay.

Today's unemployment rate for youth aged 16 to 21 is 15 percent. For non-white youth, the jobless rate is almost twice as high. The rate for those who have not finished high school is, again, almost double.

Vocational education programs, alone, cannot—of course—correct this problem. But, along with other programs with emphasis on special types of youth, the vocational education programs spelled out in this legislation are vitally necessary. Vocational education—as an integral part of our school system—meets a major national need just as does the Job Corps, the Neighborhood Youth Corps, the Manpower Development Training Act, and other programs. All of these programs deserve increased attention and support if our youngsters are to become contributing members to our society instead of jobless adults with no future and no hope.

As the AFL–CIO understands the legislation now being considered by your subcommittee, it would work like this:

(1) The Federal government would make grants to the state agencies as well as directly to local education agencies or non-profit, public or private institutions for the particular purpose of planning, developing and operating innovative occupational programs which may serve as models for vocational education.

(2) These programs must be designed to broaden the occupational aspirations and opportunities for youths with special emphasis given to youth who have academic, socio-economic or other problems. The proposed legislation lists four types of suggested plans:

(a) To familiarize a student—long before his senior high school year—with the total spectrum of job opportunities in our changing world of work;

(b) To provide educational experience through part-time work and to assist financially needy students;

(c) To achieve effective counseling programs and to place students in jobs;

(d) To establish innovative curricula.

(3) As the initial authorization for the Fiscal Year 1968, the proposed bill suggests an amount of $30 million.

The AFL–CIO is convinced that this amount should be significantly increased in the second year if the objectives of the bill are to be carried out effectively.

The AFL–CIO wholeheartedly endorses the proposed innovative programs and strongly believes that such programs are needed to fully carry out the Declaration of Purpose of the Vocational Education Act of 1963. This Declaration states that new programs should be developed "so that persons of all ages in all communities will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment and which is suited to their needs, interests, and ability to benefit from such training."

The AFL–CIO would like to discuss the other amendments to the Vocational Education Act of 1963 as suggested in H.R. 8525.

Of the various provisions of the proposed bill, the major change would affect an increase in the amount of the Federal funds to the states from the present sum of $225 million to $400 million a year, beginning with the Fiscal Year ending June 30, 1969.

We endorse the proposed increase in the authorization. But our experience with the implementation of the 1963 Act demonstrates a need for Federal grants to the states that go far beyond the proposed $400 million.

The next two amendments deal with the work-study and residential vocational education school programs.

There are three basic changes suggested for the work-study program: The work-study provisions that originally were to expire with the end of the Fiscal Year 1968 are renewed on a permanent basis; separate funds are authorized for the work-study and for the residential vocational programs (the present law contains a single amount directing the U.S. Commissioner of Education to determine the portion which should be used for each program); finally, $30 million are earmarked for the Fiscal Year 1968 and each succeeding year and the state matching requirements are reduced from 25% to 10%.

The AFL–CIO endorses all these amendments and recommends an additional change.

Section 13(c)(3) provides that a student may receive a maximum of $45 per month or $350 in any academic year for work of no more than 15 hours per week. We can see no justification for such minimal pay rates. Why should students enrolled in a regular vocational education work-study program receive compensation that is much lower than the compensation paid to Neighborhood Youth Corps students? It is a great injustice to the student to base the choice between a work-study program offered by a vocational high school and a Neighborhood Youth Corps program on immediate economic considerations. This competition is educationally and economically unsound. Both programs—work-study and Neighborhood Youth Corps—are needed to take our youths from the streets and train them for a place in the world of work.

We are particularly pleased with the recommendations for residential vocational schools. Unfortunately, the provisions of the 1963 Act were never given a chance to be tested. We hope that Congress will finally see to it that the funds authorized will also be appropriated.

The major changes in the section on residential vocational schools can be summed up as follows: Residential programs must be available to students, 15–20 years of age, without tuition, fees and other charges and without racial discrimination. Special consideration should be given to youths who have dropped out of school or who are unemployed. An amount of $10 million should be authorized for Fiscal Year 1968 and $100 million for each of the Fiscal Years, 1969–1972. The allocation formula assures at least one residential vocational school to each state. The states are required to match Federal funds by 10% from state funds for the Fiscal Years 1968 and 1969 and by 25% for the Fiscal Years, 1970–72.

The AFL–CIO strongly supports residential vocational schools and hopes that Congress will see fit to demonstrate the feasibility and desirability of residential vocational schools, but we can see no justification for the proposed increase in state matching funds.

H.R. 8525 also adds a new section to the Vocational Education Act of 1963 which would improve the quality of teaching.

The bill would authorize $20 million for Fiscal Years 1969, $30 million for Fiscal Year 1970 and $35 million each year for Fiscal Years 1970–73 for a variety of programs that would include the following: in-service training programs; cooperative exchange programs of vocational education teachers and school administrators with skilled technicians and supervisors in industry; institutes for retraining teachers, counselors and administrators.

The new section of the bill provides additional funds ($1.5 million for Fiscal Year 1969, $3 million for Fiscal Year 1970, $5 million for Fiscal Years 1971–73) for fellowships and stipends. The U.S. Commissioner of Education would award a number of fellowships to persons who plan careers as teachers, counselors, researchers or administrators in the field of vocational education.

The AFL–CIO fully endorses the fellowship and exchange programs. The shortage of competent teachers, counselors and school administrators in vocational education is very serious. The AFL–CIO, together with various professional organizations, has pointed out repeatedly that this serious handicap must be overcome because without a competent teaching, counseling and administrative staff, the best vocational education program will remain an unfulfilled dream.

Another amendment proposed in H.R. 8525 deals with a change in the George-Barden Act which would increase the annual authorization for training programs of practical nurses from $5 million to $50 million.

One of the new and progressive principles of the Vocational Education Act of 1963 is that vocational education programs should be "realistic in the light of actual or anticipated opportunities for gainful employment." It is the responsibility of our vocational education system to establish such priorities for the use of Federal, state and local funds as are necessary to meet the occupational needs of the labor market.

The need for training practical nurses and other health occupations is undisputed. There is no doubt that more Federal, state and local funds must be spent to overcome the great shortages in the field of health occupations. But, accelerated training for health occupations, as part of vocational education, should be carried out within the framework of the Vocational Education Act of 1963, and should be financed from the general Federal funds to the states. It would be contrary to the policy of the 1963 Act to revert to the out-moded way of earmarking Federal funds for special categories of occupations.

In conclusion, it should be pointed out that the Vocational Education Act of 1963 brought new directions to vocational education and enlarged its scope to a level where Federal funds are available for many occupations below the level of a baccalaureate degree.

We recognize the Act's accomplishments since 1963. But, we are also concerned with the slow pace of implementation of the new goals and directions at the operating levels.

It must be the responsibility of the National Advisory Council on Vocational Education to recommend means to bridge this gap so our vocational education system can better prepare our youths and adults for the jobs needed and available in the next decade

The AFL–CIO would appreciate your placing this letter in the record of your hearings. Thank you for your cooperation.

Sincerely yours,

ANDREW J. BIEMILLER,
Director, Department of Legislation.

STATEMENT OF THE CHAMBER OF COMMERCE OF THE UNITED STATES

(By Robert F. Jacobsen*)

The Chamber of Commerce of the United States welcomes the invitation of Chairman Pucinski to submit a statement on the proposed amendments to the Vocational Education Act of 1963.

The Chamber of Commerce and businessmen in general have long recognized the importance of vocational education. We have long supported Federal efforts to stimulate states and local communities to design courses to prepare youth for successful, productive careers. (This support pre-dated passage of the first National Vocational Education Act of 1917.)

Effective vocational education programs help communities develop answers to their manpower needs. While serving youth, these programs develop the manpower needed by local enterprises. The availability of qualified manpower attracts new industry an enables local business to grow.

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*Robert F. Jacobsen, Staff Associate, Human Resources Development Group, Chamber of Commerce of the United States, is a specialist in Manpower Training and Vocational Education.

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This business appraisal of vocational education was illustrated by a Chamber of Commerce presentation at the budget hearing for area vocational schools in Kansas, December 19, 1966. In explaining their reasons for requesting a larger state appropriation for vocational schools, the business leaders reported:

their motivation stems from a shortage of skilled labor;

their reesarch shows 30 to 50% of the employees in Kansas industries received training in a vocational-technical school;

their interest goes beyond the training of youth to include training those whose jobs are being changed by technological developments;

their belief that vocational training serves towns of all sizes;

their recognition that unless the overall supply of skilled labor is increased there will be additional turnover of employees and damaging tensions within communities and industries will develop.

Recently, on the occasion of the 50th Anniversary of the First National Vocational Education Act (Smith-Hughes, 1917),, the National Chamber endeavored to put the spotlight on ways in which business and professional leaders can participate in the planning of curricula, methodology, course objectives and emphasis. This spotlight focused on the local and state advisory committees. The National Chamber believes that when Congress prescribed the formation of a National Advisory Committee on Vocational Education it was recognizing that representative leaders can keep training programs geared to current needs and conditions. A number of National Chamber releases were developed and distributed to encourage business leaders to participate in their vocational school programs. These releases (editorials, news reports and a nationwide radio show) explained the role of advisory committees, emphasizing their functions to be:

interpreting job opportunities, especially important now when there is such rapid change in technology;

helping build curriculums;

reviewing the adequacy of training facilities and appropriaitons of equipment; and

selecting, aiding and recognizing qualified instructors.

Our research has indicated that this type of cooperative thinking and continuous communication is essential if we are to have dynamic vocational education.

Throughout the history of vocational education, there has been the opportunity for this type of continuous collaboration, but too often the advisory committee mechanism has been neglected. When this happens vacational education all too often becomes static and fails to keep step with the job opportunities and manpower needs of the community.

Our testimony in 1963 strongly supported the emphasis on advisory committees. We felt this was the best way to assure that vocational education be attuned to the future and not be guilty of providing "Training for Yesterday's Jobs".

We feel now, as then, that there is a need for this re-emphasis. The popular drive toward college training, which Sputnik accelerated, has not abated. Manpower shortages that could be filled by vocational-technical training have grown more acute, and vocational education has continued in the eyes of some parents and teachers to be a low-status form of public education.

This experience does not negate the wisdom of the Vocational Education Act of 1963, for some communities and some states have initiated action that has produced significant improvements. Still—the full potential of the Act is yet to be realized in many communities.

This is, in part, the result of the time lag in implementing the Act. In some cases it is the result of inertia among business leaders and educators alike.

But, we suggest that one of the most significant barriers to full implementation of the Act has been the myriad of short-range manpower development programs which have beclouded the issue and delayed community consideration of the long-range manpower development processes envisioned in the Vocational Education Act of 1963.

The new programs of the Office of Economic Opportunity, the Labor Department and elsewhere have literally taken the public's eye off the ball. These quick "band-aid" treatments for current manpower and social problems have been distracting. They have kept community leaders so busy that they have neglected the review which would have resulted in planning and organizing programs to reach longer-range goals, including activities designed to increase the readiness of our labor force to adapt to changes in job requirements and opportunities. These ideas were brought out in the remarks made by Thomas N. Stainback, Executive Vice President, Greater Cincinnati, Ohio, Chamber of Commerce on

May 1, 1967, during the National Chamber's Annual Meeting. Mr. Stainback expressed concern with:

the tendency to overlook the extensive training efforts of industry;

the multiplicity of government training programs; and

the need for local chambers of commerce to serve as a catalytic agency for the manpower training activities of the community.

Because of these interests we welcome the opportunity to encourage business leaders to share with members of Congress examples of how their communities have followed through on the Act. In the event further field hearings are held, we will encourage businessmen to report the progress and the barriers to progress they have experienced.

Now we would like to address comments to several specific proposals in H.R. 7380 and H.R. 8456

1. We appreciate the value of having Work-Study programs in local and area vocational schools.

We were disappointed to see that this year's Administrative budget called for phasing the Work-Study program into the Neighborhood Youth Corps.

Under the vocational education program there has consistently been a lower administrative cost and a higher percentage of local matching funds. This plus added emphasis on education makes us conclude Work-Study under the Vocational Education Act of 1963 is much more desirable.

Without taking a position on the merits of Federal spending for such purposes, we would prefer to have money currently being used for the Neighborhood Youth Corps allocated for Work-Study programs administered through local and area vocational schools.

2. We see Residential Vocational Schools as offering great potential, for developing efficient, responsive answers to area manpower needs.

We believe that Residential Vocational Schools represent a long-range answer toward which business and vocational education should be working.

Experimentations, innovations and demonstrations are so often talked of, it is a shame that a Congressionally endorsed idea has not been tested more extensively.

Here again, whether or not we see a need for Federal funds, we would prefer to have money currently being used for the Job Corps allocated for development of Residential Vocational Schools and programs.

3. We are interested in improving the performance and increasing the quantity and quality of vocational educators.

While we do not like to see fragmented efforts and would prefer not to divide the field of education, we have heard of and observed examples of vocational education being neglected in terms of fellowships, in-service training, etc.

To this end we are proud to point to examples where vocational education and guidance personnel have been invited into the business community to see, learn, and discuss job opportunities and job requirements. In Union Township, New Jersey, the Chamber of Commerce arranged for the coordinator of the high school's part-time cooperative training program to spend six weeks visiting local business firms to learn of job opportunities and job requirements. This is credited with up-grading the school's Vocational Education part-time cooperative training program.

We have and will continue to encourage the businss community to provide such opportunities. Many other communities and companies have done this, e.g. last year in Akron, Ohio, The Goodyear Tire and Rubber Company provided similar company experiences for eight high school counselors.

We believe more opportunities of this kind could be made available *IF* the business leaders of a community *were asked.*

Though addressing these comments to H.R. 7380 we have been indirectly commenting on H.R. 8456, an even longer range answer to the problem of matching youth with job opportunities.

More information about job opportunities and occupational education should be provided to youth *before* they leave school.

We want to encourage work experience as an important part of the educational process of "growing up". To business, coordination and flexibility are more essential than course credits in the matching of youth and opportunities for work experience.

This coordination has to come through people working together. Vocational education has the mechanism in its advisory committees and vocational education coordinators. Perhaps rather than seeking funds for experiments and demonstration projects we should study some of the cooperative activities through which business leaders and educators are currently improving occupational guidance and work experience programs.

An example of an approach already in use is the series of annual "Jobs and Skills Surveys" being conducted in Pittsburgh, Pennsylvania. The second in a series of five annual reports has been published and distributed to teachers, counselors, school administrators and business leaders.

The annual reports provide a quantitative summary of the skill desired by the region's employers and the skills provided by the region's schools. These reports enable educators to develop appropriate vocational programs.

Plans for the third survey are well under way. The Chamber of Commerce of Greater Pittsburgh carries out an important part of each year's survey. A review of the simple forms used to collect the data should convince concerned business leaders and educators that similar studies could be made in their communities.

Data on future manpower needs has also been compiled by the Dallas Chamber of Commerce working with the Texas Employment Commission.

In a publication titled, Metro Dallas Manpower Outlook to 1975, the Dallas Chamber of Commerce reported the findings of their fourth, and most extensive survey. This report provides a comprehensive summary by industry of occupational opportunities and educational requirements.

Two interpretative publications of the Dallas Chamber of Commerce present the Manpower Outlook statistics in a way that aids intelligent career selection and preparation.

Jobs With a Future, a guide to employment-oriented education states in its foreword, "Skill training provides earning power for careers * * * with or without college * * * all the emphasis in the last few years on the importance of a college education has caused us to forget that the biggest demand is, and will be, for people with special skills". Copies have been distributed to students in the Dallas area's secondary schools and community colleges and to those in a position to counsel with adults who are less than fully employed.

A Guide to Career Opportunities in Dallas, is another way of presenting information about job opportunities. Over 55,000 copies have been distributed to area students and counselors.

These publications are fine illustrations of what business leaders can do and will do when they are given an opportunity to participate in projects aimed at better vocational guidance and education.

Indicative of the importance of business involvement in educational processes is the recent report from the Manager of the Education Department of the Dallas Chamber of Commerce.

"The seventeen curriculum advisory committees organized to work with the school officials in preparing for the construction of the $15 million scientific/technical/vocational high school in Dallas have done a tremendous job. All the committees have made their report * * * their first assignment was to make recommendations on equipment to be used in the instruction of various curriculum clusters. Each report recommends facilities and equipment business leaders feel to be essential to the effective teaching of their occupations. This information was passed on to the architects working on the new central high school".

The direction for this business support for vocational education comes from a Chamber organized Central Committee On Employment-Oriented Education. The Committee's objectives are:

1. To provide a county-wide voice, representing all communities within the county, in behalf of employment-oriented education;
2. To present to school district officials the facts relating to need for employment-oriented education, and to encourage them to give increasing emphasis to this type of education in their facilities and curricula;
3. To conduct a continuous educational campaign in behalf of employment-oriented education, utilizing all communications media to the fullest possible extent to demonstrate that no stigma is attached to the boy or girl who prepares himself to meet occupational requirements in the career he or she intends to follow after graduation from school, and to sell parents and school counselors on the need to encourage students to prepare themselves for such job opportunities;
4. To communicate with public schools' staffs, and particularly the student counselors, on the community's prospective job opportunities and the ap-

plicable minimum requirements for both general education and specific occupational training;

5. To develop and maintain rosters of business and professional men and craftsmen in the various occupations who will make themselves available for career counseling with students; and,

6. To communicate to the community the employment-oriented education opportunities which the schools provide and encourage maximum response to those opportunities.

The value of the support concerned business leaders can provide for vocational education is illustrated by this list of activities currently being carried out by the Central Committee. Each activity has been assigned to a separate subcommittee.

Develop a speakers bureau of business leaders willing and able to talk on career opportunities and preparation;

Write speeches and design visual aids for the speakers bureau;

Secure publicity (electronic billboards, posters, radio and TV spots, etc.) to promote the value of vocational training;

Develop packets of occupational information for use in organizing and conducting career day programs;

Contact professional and civic organizations to secure speaking engagements for the speakers bureau;

Contact youth groups to secure speaking engagements for the speakers bureau and to develop a student speakers bureau willing and able to speak on careers and career preparation.

Leadership, participation and support of this quantity and quality is currently the exception; but the results produced make it well worth developing. We invite Congress to joint our Federation in a campaign to up-grade the performance of advisory committees. Such a campaign could include symposiums for and other communications to those serving on state, local and industry advisory committees. Its purpose would be to develop a better understanding and a working partnership between professional educators and the business community to the mutual benefit of both.

Attachment

[From Here's the Issue,* Sept. 8, 1967]

VOCATIONAL EDUCATION

The establishment and funding of programs to train people for jobs has become a major occupation of Congress.

Now pending is H.R. 7380 (Pucinski, D-Ill.) and other legislation that would make substantial changes in the Vocational Education Act of 1963, and boost the authorized appropriations for grants to the States for such education to $400 million per year from its present $225 million.

At the same time, major Congressional and public attention is focused on the Job Corps, the Neighborhood Youth Corps, manpower development and training programs, higher education, elementary and secondary education and a multitude of other programs.

Vocational education it sometimes seems is regarded as the step-child at the family reunion.

On August 14, Floyd D. Johnson, President of the American Vocational Association, told the Subcommittee on Education of the Senate Committee on Labor and Public Welfare:

"It seems to me that there is today at the Federal level an imbalance in expenditures for various levels and types of educational programs.

"For higher education, Federal expenditures are $4.5 billion.

"For elementary and secondary education, $3.2 billion.

"For occupational training of various types, including Office of Economic Opportunity programs, MDTA, $1.8 billion.

"Of the $1.8 billion, only $280 million is authorized for vocational training in high schools, area vocational schools, community and junior colleges and technical institutes."

The amount of Federal money, of course, is not an accurate reflection of the size of various programs, because far more local and State than Federal funds go into vocational education.

At the same time, the "imbalance" raises serious questions.

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*Published every other week while Congress is in session by the Legislative Department, Chamber of Commerce of the United States.

LOGICAL MECHANISM

For the past 50 years, vocational education has been an institution in our public schools.

Logically, it would seem, this institution would be the key mechanism in our efforts to train people for productive work. Instead, a multitude of "crash-type" programs have mush-roomed.

Why?

In a statement submitted to the House General Subcommittee on Education, Robert F. Jacobsen, Staff Associate, Human Resources Development Group, of the National Chamber, said:

"The new programs of the Office of Economic Opportunity, the Labor Department and elsewhere have literally taken the public's eye off the ball. These quick 'band-aid' treatments for current manpower and social problems have been distracting.

"They have kept community leaders so busy that they have neglected the review which would have resulted in planning and organizing programs designed to reach longer-range goals, including activities designed to increase the readiness of our labor force to adapt to changes in job requirements and poportunities."

There can be little doubt that the political appeal of dramatically-proposed and dramatically-announced new programs is a substantial factor.

But the underlying problem is deeper, involving the attitudes not only of politicians, but of educators, school boards, the public generally—and the business community.

Many profesional educators regard elementary and secondary education primarily from the standpoint of its ability to prepare students for college. Under this viewpoint—also shared by some parents—vocational education is a low-status form of public education.

As a result, vocational education sometimes receives a low priority in the battle for public funds. *Pennsylvania Business*, the official publication of the Pennsylvania State Chamber of Commerce, in a report on vocational education in that State summarized a common problem:

"As, of 1963, the record of achievement was not very good.

"Pressures by public school teachers for higher salaries, plus a need for a vast building program to meet the large overall public school enrollment expansion in the 1950's, required a massive increase in school expenditures. Public school expenditures in Pennsylvania increased from $352 million in the 1949–50 school year to $971 million in 1962–63. Vocational education needs were largely by-passed because of lack of funds.

"Vocational education per pupil costs are higher than most other types of education. Much of the training has to be closely supervised and a large capital expenditure is needed for machinery and equipment.

"This partially explains why vocational education enrollment between 1950 and 1963 (including part-time and evening extension education) increased only from 92,685 to 108,162 while total public secondary school enrollment increased from 595,600 to 903,650. Vocational education was losing ground as a part of the over-all education program of the public schools."

EMPHASIS ON AGRICULTURE

A major turning point in vocational education came in 1963—although the Federal Government's participation in vocational education goes back some 50 years to the 1917 Smith-Hughes Act.

This Act reflects the economy of the times, and the programs that resulted from it emphasized agriculture, home economics training, and a few of the trades.

Over the years, other Acts have expanded the program.

In 1946, the George-Barden Act provided that funds could also be used for education in the retailing and service industries, and, 10 years later, the fisheries trades were made eligible.

Also in 1956, practical nurse training was specified as eligible for aid, and the National Defense Education Act amended the George-Barden Act so as to permit the training of highly-skilled technicians.

Two broad criticisms of vocational training were most frequently voiced.

One was that vocational training was essentially a hobby-type operation—the building of bird houses in woodcraft shops.

Another—and more telling—criticism was that even the more intensive courses were "preparing today's youth for yesterday's jobs."

For example, the Office of Education reported that, of the States which in 1961–1962 were using Federal funds to help support vocational courses in high school:

Only nine were offering training for office-machine repairmen.
Only six, for appliance repairmen.
Only four, for dental technicians.
Only three, for hospital aides.
Only two, for nurses aides.

The Vocational Education Act of 1963 gave the program new dimensions.

Instead of emphasis on enumerated specific occupations, such as agriculture definitions were broadened so as to permit training to be tailored to the occupational needs of today.

Moreover, as Lowell A. Burkett, Executive Director of the American Vocational Association, has pointed out the 1963 Act greatly broadened the scope of vocational training so as "to serve the needs of people, rather than the needs of the various educational areas":

"For example, the purpose of the 1963 Act was to serve the needs of those in high school, those in post-high school programs, those adults who need training and upgrading and also the disadvantaged people, who for some reason or other, are not entering the labor market and for whom we must do something."

NEW PROGRAMS

The 1963 Act, moreover, authorized two new types of programs.

One is the Work-Study program, which enables a student to continue his education while holding down a part-time job at the school or some public agency.

Work-study is a variation of the cooperative part-time training concept under which many young people go to school one-half day and work the other half.

Both of these programs offer the advantage of work-experience, job-related guidance, and academ training.

Says Representative Pucinski:

"Here was one of the real significant break-throughs. American industry became a partner in the educational process of young Americans. In the work-study program, youngsters would work part of the time, study part of the time, and earn some money along the way * * *

"I'm sure the number of young Americans who have avoided becoming 'dropouts', delinquents and a lot of other things is large."

The second major innovation was the authorization of Residential Vocational Skill Centers—which are somewhat different from the area vocational schools that provide technical training for students in a sizable geographic area.

Although Congress has not as yet authorized funds for the Residential Vocational Skill Centers, there is bi-partisan support for the program.

Representative Pucinski declares:

"I think that we have to give the States some lead time to set up these Vocational Skill Centers, perhaps two or three years.

"But * * * if * * * the States will set up good effective Vocational Skill Centers, both residential and non-residential, we can phase out the Job Corps in two or three years; simply because I think the Vocational Skill Centers can offer a youngster a good deal more. They can also give them a basic education. It's important to teach a youngster English, history, reading, math, and all the other things, along with a skill in his vocational interest."

Both the work-study program and the Vocational Skill Centers faced a major threat this year, when the Administration urged that the programs be turned over to its War on Poverty program and placed in the Neighborhood Youth Corps and the Job Corps.

The threat was at least temporarily blocked when the House Appropriations Committee refused to go along with the shift.

PROPOSED EXPANSION

Everyone agrees that the Vocational Education Act of 1963 provided a broad foundation for vocational education. But the results so far have been spotty. Some communities and States have initiated action that has produced significant improvements, but most observers agree that the full potential of the Act is still to be realized.

The Vocational Education Improvement Act of 1967, which its author, Representative Pucinski says "may well be the 'sleeper' of the 90th Congress" is pending, with Committee action expected in late September.

In addition to boosting the maximum authorized annual Federal aid for vocational education from $225 million to $400 million, the Act would include:

$30 million annual authorization for work-study programs to help youth find part-time jobs while going to school.

$10 million in annual matching funds to help States establish residential vocational schools to attract past school "dropouts" to schools where they can live and undergo vocational training.

$20 million in fiscal 1969, $30 million for fiscal year 1970 and $35 million for the next three years for teacher training, including fellowships for teachers, educators, researchers and administrators.

In a recent *What's the Issue* radio interview, Rep. Pucinski developed the purposes of the legislation:

"This legislation is designed to try, with the help of American industry, to bring our vocational education programs into step with modern-day needs. * * *

"The whole purpose of this legislation is to train youngsters in the crafts and trade skills so that they will be able to step into meaningful employment when they graduate from high school * * *

"One amendment is to provide some $30 million for development of new programs to meet the changing technology of American industry, to bring in new techniques and up-grade the whole status of vocational education.

"Another part of this amendment is to permit schools to enter into contracts with private industry and bring private industry more closely into the vocational education picture * * *

"Another amendment seeks to develop on a larger scale the so-called Vocational Skill Center for youngsters who do not plan to go on to college or for those who will go to college but want to get a basic education for engineering or some scientific courses * * *

"The educators of America seem to have been more obsessed with college education and developing professors for universities. As a result, our Vocational Education teaching staffs have been somewhat neglected * * *

"We also hope to provide local communities with Federal aid for brick and mortar to build and to construct facilities for training youngsters in their vocational pursuits."

THE NEEDED INGREDIENT

Although the Federal Government can provide some stimulus, particularly by more effective leadership and emphasis on vocational education in the U.S. Office of Education, experience has clearly demonstrated that the over-all value and calibre of vocational education in any community is in direct proportion to the interest of the business community in the program.

Both experience and research indicate that cooperative effort and continuous communication between educators and the business community is essential if vocational education is to achieve full potential.

Too often, this cooperation is missing—either because the business community is unconcerned or the educators fear that someone else will be "trying to run their schools."

The 1963 Vocational Education Act recognized this problem, and emphasized the role of a National Advisory Committee on Vocational Education as well as similar committees at the State and local levels. Such committees have long been in existence, but have not always been too effective.

Essentially, the role of these advisory committees is:

Interpret job opportunities, especially important now when there is such rapid change in technology.

Help build curriculums.

Review the adequacy of training facilities and equipment.

Select, aid and recognize qualified instructors.

Collectively, however, these duties add up to one purpose: To insure that vocational training is preparing people for *today's jobs*—and *more specifically that they are being trained for today's jobs in their communities.*

When vocational education is geared to the needs of the community it becomes an effective force in economic and social improvements, an essential part of total community development.

The first Technical Institute constructed in the State following enactment of the Vocational Education Act of 1963 was at Kenosha, Wisconsin. Now, the theme of Kenosha's appeal in an industrial development folder prepared by Kenosha's business leaders is: "Kenosha, Wisconsin—the city that educates for industry."

Says Ernest Mitchell, Chairman of the National Chamber's Human Resources Development Committee:

"We have found this to be true: When industry wants to come into a new area they go to the vocational school and ask, 'Do you have people we want in our industry?' If they don't have them, vocational schools say, 'We will train them for you.'

"Such relationships have been highly successful. Private industry has made use of vocational schools to man their plants with properly trained employees, and they go into States that have high quality vocational training programs."

In fact, business support of vocational education can take a variety of forms.

Weirton, West Virginia.—Thomas E. Millsop, Honorary Chairman of the National Steel Corporation, Weirton, West Virginia, has declared:

"Contrasting with Federal job training programs that are entirely governmental administered, the Trade and Industrial School stands as a symbol of what can be accomplished in vocational education by cooperative action between private industry, professional educators, and Federal, State, and municipal governments."

The school is conducted through the cooperation of Weirton Steel, the Hancock County Board of Education, and the West Virginia Department of Trade, Vocational and Industrial Education.

The Advisory Committee is appointed by the County Board of Education.

The curriculum includes technical training for jobs that are in demand by local industry, with more and more emphasis being placed on electronics and electricity.

The school is open to both adults and juniors and seniors in high school.

An adult attending the Trade and Industrial School may choose a class schedule that rivals one of a branch college pupil.

The training runs from September to May, with three-hour sessions held one night each week, unless shop periods are required; in this case, sessions last five hours. Technical courses cover 100 hours of instruction; shop courses, 144 hours.

Participating students from the two high schools attend classes during the day. An average of 120 junior and senior boys from each school receive training in courses, such as electricity, auto mechanics, machine shop and welding. To receive vocational course diplomas, they must have 480 hours per year or a total of 960 hours to graduate.

Kansas.—A different type of business support came in Kansas where the State Chamber of Commerce at a budget hearing in 1966 urged the restoration of cuts that had been proposed in State funds for vocational education.

In explaining their reasons for requesting a larger State appropriation for vocational schools, the business leaders reported:

> Their motivation stems from a shortage of skilled labor.
>
> Their research shows that 30% to 50% of the employees in Kansas industries received training in a vocational-technical school.
>
> Their interest goes beyond the training of youth to include training those whose jobs are being changed by technological developments.
>
> Their belief that vocational training serves towns of all sizes.
>
> Their recognition that unless the overall supply of skilled labor is increased there will be additional turnover of employees and the development of damaging tensions within communities and industries.

Pittsburgh, Pennsylvania.—In 1965, the Pittsburgh Chamber of Commerce initiated a five-year study of the availability of jobs and skills in the Pittsburgh area.

The primary purpose of the survey is to draw a comparison of the skills demanded by the region's employers and the skills provided by the schools—a comparison which will enable educators to develop appropriate occupation-vocational-technical training programs.

The hope is that, given the facts on the supply and demand for specific skills, educators and business can work together to bring the two into better balance.

Dallas, Texas.—In Dallas, business support for vocational education comes from a Chamber Committee on Employment-Oriented Education. Not only does the Committee work continuously at promoting "employment-oriented education", and in presenting facts on employment opportunities in the area to students it became involved in the very beginning of recent projects, as evidenced by this report from the Manager, Education Department:

"The 17 curriculum advisory committees organized to work with the school officials in preparing for the construction of the $15 million scientific/technical/vocational high school in Dallas * * * have made their reports * * * their first assignment was to make recommendations on equipment to be used in the instruction of curriculum clusters. Each report recommends facilities and equipment business leaders feel to be essential to the effective teaching of their occupations. This information was passed on to the architects working on the new central high school."

COUNSELING

In addition to working on courses and equipment to insure that they offer the type of training that will equip students to do specific jobs that are in demand, business has an opportunity to work either directly or indirectly with students themselves in the broad area of vocational counseling.

There are not enough qualified vocational counselors, just as there are not enough competent vocational teachers. The least that should be done is to provide opportunities for guidance counselors and vocational educators to discuss with local employers the job requirements that are open to local youth.

Last year, for example, the chamber in Union Township, New Jersey, provided a summar scholarship for the faculty member who coordinates a local part-time cooperative training program. The scholarship enabled the participant to spend six weeks touring plants and offices, observing operations, talking to both employers and employees.

The program was so successful that both the New Jersey State Board of Education and the Federal Department of Education would like to see similar Guidance-Counselor-Business Familiarization programs used throughout the State and Nation.

Says Representative Pucinski:

"By 1970, this country is going to have 9½ million young people taking Vocational Education. One out of every two children attending high school will be in some form of Vocational Education."

A program of this size, of course, can be justified only by its success in developing *marketable skills*. Experience has shown that the Federal government can stimulate such programs, but that Federal legislation and Federal dollars alone cannot provide such skills.

They can be developed only in local and area schools, *locally directed and supervised* and operating with the *continuous cooperation of business and educators.*

MICHIGAN STATE CHAMBER OF COMMERCE,
Lansing, June 2, 1967.

Congressman ROMAN C. PUCINSKI,
Chairman, General Subcommittee on Education, Education and Labor Committee, House of Representatives, Washington, D.C.:

The Michigan State Chamber of Commerce, a business organization representing 2,500 firms of all types and sizes in the State of Michigan, has reviewed the statement submitted to you by Robert F. Jacobsen of the Chamber of Commerce of the United States. We endorse this statement and sincerely request that you give serious consideration to the proposals made by Mr. Jacobsen.

The Michigan State Chamber has an active education program designed to improve the quality of education in Michigan. We have been particularly concerned with the study of Vocational-Technical Education because we feel that this phase of education has been neglected far too long with the unfortunate result that many high school graduates, unable to go to institutions of higher learning, are totally unqualified to pursue useful occupations.

We have conducted extensive studies on conditions in Michigan and have worked for state legislation to provide for establishment of Area Vocational Centers. We have further conducted an extensive campaign for inclusion of Vocational-Technical studies in the Community College programs.

We recognize the grave weaknesses in the present educational system that has neglected the proper training of the 60 to 70 percent of the high school pupils who cannot pursue higher education studies.

The State Chamber believes that the best educational results will be obtained through continued reliance upon both public and private institutions with the variety of programs appropriate for our State, which has many occupational and culture patterns. We believe firmly that federally financed education programs of all types should be closely integrated with state and local school requirements but should not duplicate, supplant or overlap state and locally financed programs.

Through our Education Committee and specialized staff, we urge businessmen to participate in local and state educational programs to assure that local, state and federal funds be spent properly to assure maximum education at minimum costs. In addition to support for various types of public programs, we urge our business members to use every opportunity to participate actively in the Vocational-Technical Education programs through such activities as:

1. Consultation on construction and business administration where Area Vocational Centers are being established.
2. Gifts or loans of equipment or facilities for Vocational-Technical Education.
3. Part-time and summer employment opportunities for teachers and students.
4. Scholarships and loan resources for students desiring to pursue a skilled trade.
5. Support of bond issues and school levies to assure proper funds for the institutions involved.

These examples are used to demonstrate our interest in Vocational Education. We trust this information will be helpful to you and your Committee in making judgment on proposals now being considered.

Sincerely,

HARRY R. HALL, *President.*

CHAMBER OF COMMERCE OF HAWAII,
Honolulu, June 6, 1967.

Hon. ROMAN C. PUCINSKI,
Chairman, General Subcommittee on Education, Education and Labor Committee, House of Representatives, Washington, D.C.

DEAR REPRESENTATIVE PUCINSKI: We have received the statement regarding proposed amendments to the Vocational Education Act of 1963 to be submitted to you by the Chamber of Commerce of the United States. We would like to add our agreement to the points outlined in their approach and feel that there is value in cooperative thinking and continuous communication which are essential if we are to have dynamic vocational education.

The Chamber of Commerce of Hawaii has a Vocational Education and Manpower Committee which is very active in this field.

In August, 1966, we held an all-day Membership Legislative Conference. Over 700 Chamber members were in actual attendance and well over one-half of these were individual proprietorships and operators of firms in the very important small business category. A year of concentrated committee work preceded the conference. Committee meetings followed by floor debate on the day of the meeting resulted in adoption of policy statements. In the field of Vocational Education, the following was adopted:

Vocational Education.—Extend utilization of two vocational/technical schools and high schools and make them available on a year-round basis; extend the Cooperative Distributive Education Course. Retain, provide and/or expand and improve Vocational Education at all age levels leading to the advancement of both practical and cultural knowledge. (See Appendix 6—attached.)

Very truly yours,

C. J. CAVANAGH,
Executive Vice President.

APPENDIX 6. VOCATIONAL EDUCATION

The basis for extending both the Vocational/Technical schools and the Cooperative Distributive Education Course is as follows:

It is found that the demand for manpower is not confined to any one group of employers and that it is wide-spread in the community. Mainland recruiting efforts, particularly by the military, have not produced results in eliminating shortages. There are both immediate and long-range needs which have to receive attention. The Oahu manpower skill survey of selected key occupations reveal that employment on Oahu, which was estimated at 185,500 for last year, is expected to increase by 10% in 1967 and 21% by 1970 to a level of 223,800.

Business is upgrading and training in all classifications of jobs, as well as developing unskilled graduates through giving them fundamentals in trades and crafts.

The other possibilities which exist to meet this problem are to utilize existing institutions to the fullest and then fill in the gaps.

To supplement the job training program offered by business you have the Technical school programs (Community College system), attended by high school graduates and adults who know they have to get some training in order to get something besides unskilled work. These people are motivated and anxious to learn.

We have two technical schools on Oahu who can handle approximately 1,600 people in a two-year program, and can thus graduate about 500 people per year. It is found that at least several hundred applicants are turned away by the technical schools because of limitation of time, space and instructional personnel. However, the two schools on Oahu have classroom facilities, shop facilities and all the necessary tools for instruction in trades and crafts. Additionally, these facilities and instructors are only utilized about eight months out of a calendar year because of Spring and Summer vacations.

We find that there are federal funds available for teaching under the Vocational Education Act of 1963 (P.L. 88–210). We know that more people must be trained in programs that are now established; also, to establish new programs in areas not yet explored, but which already show a manpower shortage. Knowing that the necessary funds are available, what can be done for the present to accommodate greatly increased applicants for entrance? What is being done to offer night classes and summer school instruction so that existing facilities can be more fully utilized?

The Cooperative Distributive Education Course is a joint educational program which has enabled many students to attain full-time jobs after graduation because of their experience gained through the program. This program turns out about 242 graduates and can be immediately extended in some existing high schools and in other schools where there are sufficient work stations available. If this were to be done, it is estimated that an additional 180 students could be enrolled or a total of 422. Afterwards if other school areas are interested, their schools could be provided with facilities for training.

WEST TEXAS CHAMBER OF COMMERCE,
Abilene, Tex., May 30, 1967.

Representative ROMAN C. PUCINSKI,
Chairman, General Subcommittee on Education, Education and Labor Committee, House of Representatives, Washington, D.C.:

Administration plans, Representative Pucinski, to phase the Residential Vocational School Program into the Jobs Corps would, in our opinion, weaken vocational education in local areas.

The Job Corps program has been less than successful in several ways. In the vocational education program there has been a lower administrative cost and a higher percentage of local matching funds. The Chambers of Commerce and business in West Texas have long supported Federal efforts to stimulate local community courses that help prepare youth as skilled, productive labor. (For instance: Our Young Leaders Advisory Council on campus seminars at West Texas colleges and universities, etc.) We believe that Residential Vocational Schools represent a long range answer to job opportunities for West Texas youth and is provided *before* they leave school.

Reviewing both the Job Corps and Residential Vocational Programs leads us to believe that they should be separate and that best results can be achieved by strengthening vocational technical schools.

Respectfully,

J. FIKE GODFREY,
Chairman, Education Committee.

PENNSYLVANIA STATE CHAMBER OF COMMERCE,
Harrisburg, June 9, 1967.

Hon. ROMAN C. PUCINSKI,
Chairman, General Subcommittee on Education,
House of Representatives, Washington, D.C.

DEAR CONGRESSMAN PUCINSKI: This letter is in reference to the "Statement on Proposed Amendments to the Vocational Education Act of 1963" submitted to your Subcommittee today by the Chamber of Commerce of the United States.

That statement includes the names of a number of Chambers of Commerce which have been actively working to strengthen vocational education programs. For the record, we wish you would add the name of the Pennsylvania State Chamber of Commerce as a long-time advocate for effective vocational education.

State Chamber studies, dating back to 1946, indicate that public education in Pennsylvania has not been sufficiently related to the needs of the pupils or those of business and industry. Only a small percentage of secondary school pupils are receiving training in vocational courses despite the fact that about half of our public school graduates go directly to work in a factory, trade, or other employment·

In recent years, since the passage of the Vocational Education Act of 1963, there has been a rapid improvement in the quantity and quality of vocational education in Pennsylvania. Twenty-three area technical schools are now in operation. (In 1963, there were only seven.) Twenty-one others are scheduled to be under construction before the close of this year.

The State Chamber has urged local chambers of commerce in Pennsylvania to work closely with their schools in the development of their vocational programs to insure that the programs are in tune with the local needs of business and industry.

In the not too distant future, if present plans materialize, we expect that about 95 per cent of the students in the state will have available a diversified vocational education program. We feel that this is an important development in our education system in Pennsylvania.

Yours very truly,

A. L. EDMONDS,
Executive Director.

KANSAS STATE CHAMBER OF COMMERCE,
Topeka, June 5, 1967.

Congressman ROMAN C. PUCINSKI,
Chairman, General Subcommittee on Education, Education and Labor Committee, House of Representatives, Washington, D.C.

DEAR CONGRESSMAN PUCINSKI: The Kansas State Chamber of Commerce has long supported efforts to provide effective programs of vocational-technical education. Accordingly, we endorse the statement being presented to your Subcommittee by the Chamber of Commerce of the United States and urge your serious consideration of the views expressed in it.

Sincerely yours,

C. C. KILKER,
Executive Vice President.

MONTANA CHAMBER OF COMMERCE,
Helena, June 2, 1967.

Hon. ROMAN C. PUCINSKI,
Chairman, General Subcommittee on Education, Education and Labor Committee, House of Representatives, Washington, D.C.

DEAR CONGRESSMAN PUCINSKI: The Montana Chamber of Commerce hereby endorses the statement by the Chamber of Commerce of the United States on proposed amendments to the Vocational Education Act of 1963 which will be submitted to your Subcommittee on Education on June 9, 1967.

That statement is representative of the thinking of our membership which has become acutely aware of the importance of vocational education in recent years.

We respectfully request your consideration of our position in this matter.

Sincerely,

F. M. GANNON, *President.*

GRANITE CITY STEEL CO.,
Granite City, Ill., June 7. 1967.

Congressman ROMAN C. PUCINSKI,
Chairman, General Subcommittee on Education, Education and Labor Committee, House of Representatives, Washington, D.C.

DEAR CONGRESSMAN PUCINSKI: In reviewing the bills before your Committee on Vocational Education, H.R. 7380 and H.R. 8456, we should like to make the following comments. As a direct beneficiary of funds authorized under the

Vocational Education Act of 1963, Granite City Steel is happy to endorse the proposals in H.R. 7380 as they extend the program, which we believe has proven to be worthwhile and worthy of expansion.

For four years we have conducted the Steel Institute of Granite City, a program in which our plant, office and managerial personnel have been able to upgrade their knowledge and skill in the art of steelmaking. The steel industry is characterized today by rapid technological change and our Company is currently starting up its new Basic Oxygen Furnace and in two months will start up the new 80" computerized Hot Strip. A vast amount of training and upgrading has been possible and many people whose skill might have been outmoded by the technological advances will be able to successfully transfer to new positions and avoid the loss of their jobs.

In noting the provisions of H.R. 8456 we do not echo the enthusiasm mentioned above. It would appear to us that this Bill creates a fund with rather nebulous accountability and appears to downgrade the existing Vocational School program. Neither the Job Corps nor Neighborhood Youth Corps have achieved the results that our existing system of vocational schools has accomplished in terms of taking care of the needs of employers.

We hope that these comments assist your Committee in their deliberation on the current Vocational Education Bills and are happy to join with the Chamber of Commerce of the United States in offering these suggestions.

Respectfully yours,

J. W. CHRISTY,
Manager, Industrial Relations.

STATEMENT OF THE AMERICAN ASSOCIATION OF JUNIOR COLLEGES

I. A GENERAL STATEMENT OF THE PROBLEM

The Vocational Education Act (VEA) of 1963 is intended to assure that persons of all ages in all parts of every state have ready access to high-quality vocational education at a level suited to their needs and abilities and related to the nation's need for highly skilled manpower.

Nevertheless, a great many young people and adults in many states are not benefiting adequately, if at all, from this program at present, at least at the postsecondary and adult levels. One reason for this is the limited amount of federal support available. Representatives Carl D. Perkins, Roman C. Pucinski, and other sponsors of H.R. 2366, H.R. 7380, and related bills, are to be congratulated for their efforts to increase the total funds available.

Another reason is that the resources of the nation's two-year colleges, technical institutes, four-year colleges, and universities are not being utilized fully or effectively in the program. This is true in the education of postsecondary and adult students, in research and innovation, and in teacher training—all areas of great concern to the nation's institutions of higher education. The recent blue-ribbon Presidential Commission on Technology, Automation, and Economic Progress gave special attention to the nation's unmet needs in postsecondary vocational education, and the role of college-level institutions in meeting these needs.[1]

The Vocational Education Act is permissive. That is, it gives state boards of vocational education, many of which are oriented toward elementary and secondary education, sole discretion to distribute funds. Some state boards have chosen to award little or no support to junior colleges or four-year colleges, and others are establishing new systems of postsecondary "area schools" which may offer vocational courses in geographic areas where junior colleges or other colleges are already providing vocational programs, or actively planning to do so. This may result in a duplication of expensive facilities and staff, and a waste of federal, state, and local tax dollars. The growth of this new area school system, although it may serve very useful purposes in some cases, should itself be the subject of careful review by the United States Office of Education, Congress, and the appropriate state and local officials.

In most states, junior colleges as well as four-year colleges are administered by boards or agencies other than the board of vocational education. In these states, there may be inadequate communication between these two separate systems, one addressed primarily to elementary-secondary education and the other primarily to higher education.

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[1] *Technology and the American Economy,* 1966.

In some instances, state boards of vocational education have simply not included junior colleges and four-year colleges in the program. In others, state boards have required adherence to teacher certification laws or other regulations which are not appropriate professionally for college-level programs. In a number of instances, state boards have not made copies of relevant state and federal public documents, such as the state plan and regulations and announcements, readily available to college-level institutions.

As a result, the Commission on Legislation of the American Association of Junior Colleges has urged both statutory and administrative changes in the program. Similarly, the National Association of State Universities and Land-Grant Colleges, and the Association of State Colleges and Universities, at their November 1966 convention urged amendments to permit colleges to participate more fully and asked that special attention be given to teacher education. Member colleges of these three associations together enroll a good majority of the nation's college students and have a special interest in innovation and teacher training.

Although federal law requires "representatives" of higher education, many state boards have not involved these representatives in a meaningful way in decision-making and planning. Further, although federal regulations require (Section 104.3) that state boards report to the Office of Education (USOE) the "role and extent" of college-level participation in the program, this has not been interpreted by the USOE to mean that state boards must report the *names* of postsecondary institutions which receive federal assistance, the *enrollments* at such institutions, nor the *dollar amounts* in federal VEA support which they receive. Further, state boards do not report on the frequency of meetings with their higher educational representatives, nor the extent to which such representatives are otherwise actually involved in decision-making or planning. Many such representatives do not appear to be in close contact with other state or local higher educational officials, such a state directors of junior college education.

Federal law does not require that *objective* criteria be developed for the awarding of funds—for example, support on a per-student basis. As a result, in many states decisions are made on a highly subjective basis. As a contrast, under the Higher Education Facilities Act, criteria for awards are clearly and objectively set forth in a state plan which is made available to all potential applicants, there are clearly defined deadlines, all meetings related to the awarding of funds must be public, a public record must be kept, and there is a clearly defined appeals procedure. The Vocational Education Act does not require such clearly defined procedures.

We understand that some secondary school systems may also be treated inequitably under this system, since they too are subject to a state system which often operates by subjective judgment.

Under present law, the United States Office of Education has somewhat limited authority to deal with this situation, since most decision-making power rests with the states. However, we believe that the USOE can take some steps—collecting and publishing data on the participation of college-level institutions by states, requiring the states to submit more detailed reports on the role and extent of college-level participation, and so on.

One point needs to be emphasized: the American Association of Junior Colleges does not question in any way the importance of secondary school vocational education. If additional financial assistance is made available to postsecondary education, the Association believes that the total available should be increased so that secondary education will be supported at least at its present level and preferably at a higher level, as is envisioned in H.R. 2366 and H.R. 7380.

II. SPECIFIC RECOMMENDATIONS

1. Innovation

The proposal for federal support for innovative and exemplary projects in vocational education, requested by the administration in Title II of H.R. 6230, is unquestionably very worthwhile. It is our hope that this program will make some funds available to support innovative projects at the postsecondary level, and also that junior colleges, four-year colleges and universities will be able to participate in this program as administrators and consultants, helping to develop innovative projects at all levels of vocational education, secondary, postsecondary, and adult.

For this reason we hope that there will be no effort to give state boards of vocational education a veto power or near-veto, either in law or by informal agreement, over projects in their states.

Unquestionably, state boards and departments should play a part in this program. However, those state boards which have not involved college-level institutions actively in their VEA programs cannot be expected to include colleges in the innovative program either. Colleges and also some local school system may suffer if state boards, which may be unaware of their programs and potential, have a veto power. A state veto power might also prevent some colleges or local schools from drawing on innovative resources outside their own state. Resources for innovation are not spread evenly over the nation, and colleges as well as secondary schools should be free to draw on educational resources in other states without the fear of a state veto.

We hope, therefore, that Congress will support this proposal in its present form and that the legislative history will show clearly that no state veto power is intended either explicitly or implicitly in the administration of the program.

2. Teacher training

Pages 10–17 of H.R. 2366 and H.R. 7380 deal with proposals for teacher training. The assumption here is that teachers could be trained at all levels, secondary, postsecondary, and adult. However, almost all the funds would be administered by state boards of vocational education. The bill recommends $20,000,000 for this program in fiscal 1968, $30,000,000 in fiscal 1969, and $35,000,000 in fiscal 1970.

We feel that here, as in the case of innovation, funds for teacher training should not be allocated solely through state boards of vocational education. Teacher training is primarily a responsibility of higher education, of American colleges and universities. The present federal programs for teacher training—the college teacher program under the National Defense Education Act as well as the institutes for guidance counselors and teachers under the same Act, and the elementary-secondary teacher training programs under the Higher Education Act—are all administered by direct grants made by the Commissioner of Education to individuals and graduate schools. The same is true for the proposed new Education Professions Development program in the administration's Higher Education Amendments Act of 1967. None of these programs channel funds through state departments.

As in the case of innovation, state boards should certainly be eligible to participate in this program to develop their own proposals for teacher training, but they should not be the only channels for federal funds. There is no assurance either of adequate support for college-level vocational teacher training nor of the utilization of all the most professionally qualified colleges and universities under state vocational board administration.

We feel that these teacher training provisions are probably the most important and in their present form the most controversial part of the proposed legislation. Since these provisions were not part of the similar bills on which hearings were held in 1966 (H.R. 15444 and H.R. 15445) we hope that members of Congress, the USOE, and everyone concerned with teacher training will give them the most careful examination.

A survey now being made by the American Association of Junior Colleges and the Association of State Colleges and Universities indicates a substantial and growing interest among a great many colleges and universities in expanding teacher training programs at the college level, including programs for postsecondary vocational education. Most of the nation's universities, we believe, would much prefer a federal program administered by the Commissioner of Education.

A relatively small part of the suggested program, on pp. 14–17, does make available a limited number of fellowships each year to be awarded directly by the Commissioner. This appears to be a worthy purpose, and our only suggestion is that the number of fellowships suggested should be enlarged if possible to meet the need for trained teachers and administrators.

3. The allocation of Vocation Education Act funds

The Commission on Legislation of the American Association of Junior Colleges believes that statutory changes are necessary in order to permit college-level institutions to participate effectively in this program. One way to achieve this purpose would be to set aside, mandatorily, certain minimum Vocational Education Act funds in each state for institutions at the college level, and to amend laws and regulations in order to make certain that eligible institutions had the opportunity to make use of these funds. States wishing to provide support above the suggested minimum would be free to do so, and total funds should be increased in order to support secondary education at least at the present level.

Another solution to the problem is to establish a separate title for college-level vocational education, without interfering in any way with the present VEA programs. In this way, Congress would simply recognize that college-level vocational, technical and occupational education presents a different set of problems and needs, and should be dealt with separately.

The separate title suggestion is very similar to the *"Technical Education Act of 1962,"* H.R. 10396 of 1962, which was filed by Representative Brademas, Giaimo, O'Hara of Michigan, Quie, and Goodell, with strong support from Willard Wirtz, then Undersecretary of Labor, and from the higher educational community.[2] The same proposal was also filed as part of President Kennedy's omnibus education bill, H.R. 3000 of 1963. If the Subcommittee wishes to consider appropriate language for such a separate title, the 1962 and 1963 legislation would be an excellent beginning.

If either the separate title or the set-aside approach is adopted, it is suggested that as far as possible operating cost support under this program be made available on a per-student basis, as is now done at the junior college level with federal VEA funds in Pennsylvania and Oregon. This approach tends to eliminate a good part of the subjectivity which now exists in this program. Support for construction, equipment, and other purposes would have to be provided on a project basis or some other basis.

4. State administration of the program

Whether or not separate funds are made available, each state should have the option of creating or designating a separate state agency to administer the college-level vocational program. Such a program should administer not only the allocation of funds, but planning, supervision, and evaluation of all college-level programs. It should include representatives of college-level institutions participating in the program and some representation from the present state board of vocational education, in an advisory capacity. The two boards should work cooperatively, but the law should recognize their separate functions. An alternative procedure would be the designation of additional, voting members representing higher education to the state board.

5. Postsecondary area schools

There appears to be a need for a review on the highest levels of the United States Office of Education, by Congress, and by the states of the growth of a separate system of postsecondary area schools, especially in areas and states served by other postsecondary institutions. Since substantial funds are going for the construction of this system, it is suggested that the appropriate federal, state, and local authorities should carry out such a review as soon as possible.

This area school system raises another problem since most educators today favor *comprehensive* instititions at *both* the secondary and postsecondary level, rather than separate and isolated "technical" schools.[3]

6. The responsibilities of the United States Office of Education

We believe that the Department of Health, Education, and Welfare and the *entire* Office of Education—as well as the Bureau of Adult and Vocational Education—share responsibilities for the evaluation of this multi-million-dollar federal program.

There is no question that officials of the Office of Education are very interested in the development of postsecondary vocational education. However, so far USOE has not collected nor published data by which this program could be evaluated. Nor has the Office interpreted the "role and extent" regulation in such a way as to get a clear picture of college-level participation in the states, so that executive agencies, Congress, and the general public can understand the whole situation.

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[2] Organizations supporting this proposal in 1962 included the American Council on Education, National Association of State Universities and Land-Grant Colleges, American Association of Junior Colleges, American Personnel and Guidance Association, and National Society of Professional Engineers.

[3] The National Association of Secondary School Principals has raised doubts about the area vocational school approach in its recent publication, *Educating for Work: A Report on the Current Scene in Vocational Education,* by Dale C. Draper. (National Education Association, Washington, D.C. 1967.)

The following are some of the steps which USOE should take and can take under present federal law:

(*a*) *Data.*—The USOE can request every state board of vocational education to make available such information as the names and addresses of all postsecondary institutions which participate in each state—junior colleges, technical institutes, four-year colleges, and other postsecondary area schools, together with data on full-time and part-time enrollments and on the dollar amounts of federal VEA support which go to these institutions, both for construction and for operating costs. USOE should also request information about the careers of the *graduates* of postsecondary programs. Some of this information may already be available at USOE; in any case, most of it should be readily at hand in each state. This information should be published as soon as possible, and kept up to date annually.

(*b*) *Role and extent.*—We suggest that USOE revise its reporting forms in order to determine more clearly, under Section 104.3, the exact role and extent of higher educational participation in the program in every state. Such a report should indicate such information as the frequency of meetings of the advisory council representatives, whether the representatives are present on all occasions when decisions are made about awards, whether they are in close touch with other college officials such as state junior college directors, and so on.

(*c*) *Public documents.*—All federal and state public documents—state plans, annual state reports to USOE, federal regulations, announcements, and circular letters, and so on—should be made available to all interested institutions, both colleges and secondary schools. These documents should also spell out much more clearly the basis on which funds are awarded, in the states where this is not done at present.

(*d*) *"Problem states."*—There should be a careful investigation by USOE officials and by Congress of some of the states in which there are persistent reports that junior colleges and other colleges are receiving little or no support, are subject to inappropriate regulations such as teacher certification requirements, or are otherwise unable to participate effectively. This survey should be related to the study of the growth of the new postsecondary area school system in many parts of the nation.

This investigation should make inquiries of junior college and other college educators as well as of state boards of vocational education.

(*e*) *Encouragement of cooperation.*—USOE should also work more actively to encourage closer communication and cooperation between secondary and postsecondary vocational educators. A very useful approach to this problem would be the convening of a national conference of vocational educators at all levels, together with representatives of the appropriate professional educational organizations, to review this whole problem. Regional or state conferences of secondary and postsecondary officials and educators, under USOE auspices, would also be valuable. Such conferences should invite those institutions and groups which do *not* participate effectively at present as well as those which do.

(*f*) *Advisory Committees.*—The Commissioner of Education can also help to resolve this problem by appointing more people with a special professional background in college level vocational education to the permanent Advisory Committee appointed under Section 9 of the VEA.

THE JUNIOR COLLEGE IN DALLAS COUNTY—PROGRESS AND PROSPECTS

The Dallas County Junior College District was created in May, 1965, to establish and operate a system of public junior colleges for a major metropolitan area where a shortage of higher educational opportunities was seriously hampering progress in virtually all economic, social and cultural aspects of community life.

The county, with a population of 1¼ million, previously had only one public institution of higher education—the University of Texas' Southwest Medical School.

Community leaders who spearheaded planning and informational campaigns leading to the establishment of the district recognized that the junior college was the logical institution to meet some very urgent community needs in two primary areas:

1. Providing college education at the freshman and sophomore year levels for students seeking a bachelor's degree or beyond. These students would live at home while pursuing studies paralleling the lower division of four-year colleges and universities in a wide variety of majors. They would then trans-

fer as juniors to one of the four-year schools to complete their higher education.

2. Providing occupational training to prepare students for employment at the technician level in a wide variety of industries, businesses and public agencies in the Dallas area. The shortage of trained manpower in many fields was serious and getting worse. Yet the expanding population was producing more than ample human resources if training could be provided.

When voters established the district, they also elected a seven-member board of trustees and authorized $41.5 million in bonds to finance construction of facilities.

Two major tasks faced the trustees and the initial staff employed to get the new junior college system underway: (1) Immediate establishment of a centrally located interim college to partially meet the needs of the area while (2) research studies, planning and actions were taken leading to the launching and long-range development of a county-wide system of colleges sufficient to meet the total need.

The first task was accomplished by the fall of 1966 when the district opened El Centro College in a remodeled 8-story department store building in the heart of downtown Dallas to a day and evening enrollment of more than 4,000 freshman students. The opening followed a hectic and record-breaking planning and construction period, which also included recruitment of a 100-member professional staff to operate the new facility. This college will add the sophomore year this coming September, expanding its enrollment to approximately 6,000.

Meanwhile, major progress has been made on the second task. A comprehensive, long-range planning study was completed to project enrollments and identify areas of critical occupational training needs over the next several decades. The study indicated that the county-wide junior college system will have a potential enrollment of 16,000 full-time equivalent day students in 1970 and this number will increase more than 1,000 per year to nearly 50,000 by the year 2000.

These figures were translated into a decision to purchase sites of 200 or more acres each for six additional colleges to be located at appropriate intervals throughout suburban areas of the county.

When all seven colleges are in operation, the 900-square-mile Dallas County will have a two-year community college within easy (10–15 minute) commuting distance of every resident of the county.

Architects have been employed and planning is well underway for the first three suburban colleges—two to open in 1970 and the third in 1971. These will open with a capacity of 2,500 to 3,000 full-time equivalent day students. The remaining three will be developed at two or three year intervals during the 1970s. All six suburban colleges will be master planned for expansion by phases to 10,000 student capacity.

The six colleges have been given names suggestive of the geographical areas of the county in which they are located—Brookhaven, Richland, Eastfield, Cedar Valley, Mountain View and North Lake.

The El Centro College site includes an adjacent city block—now a parking lot—and this college, too, will be master planned for high-rise future expansion to at least 10,000 student capacity.

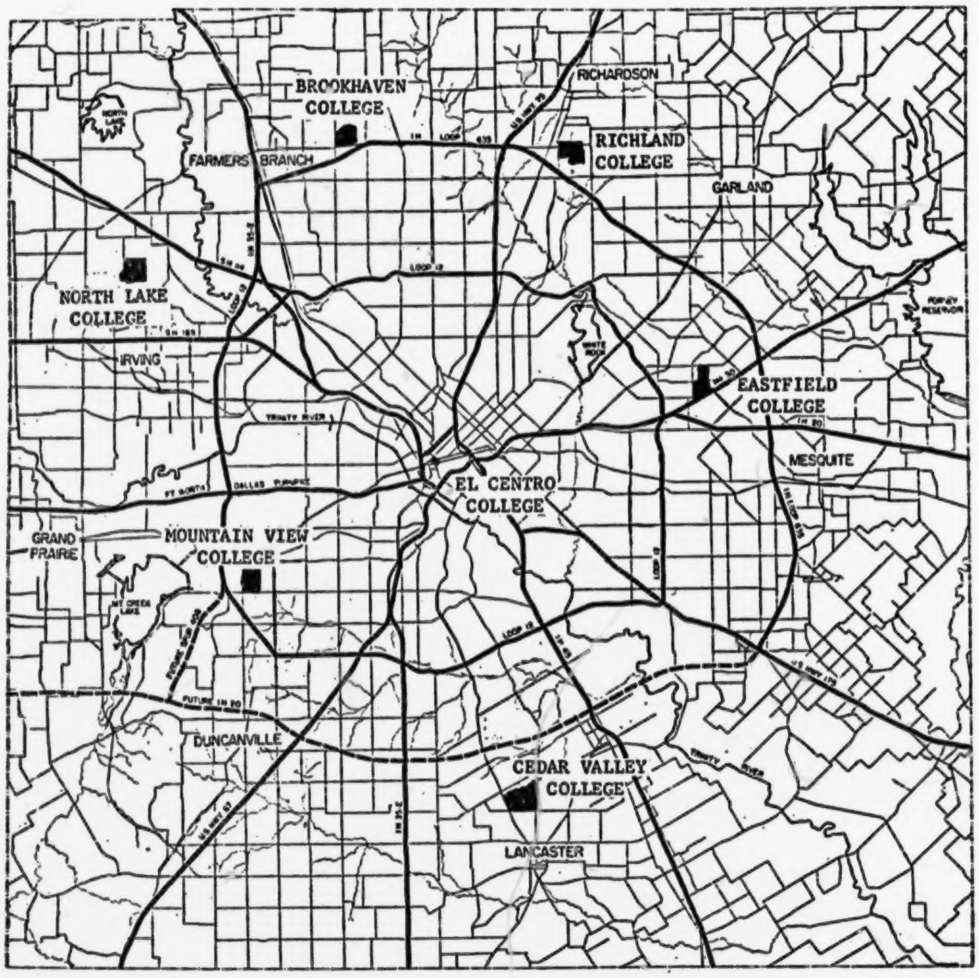
Today El Centrol is training young people for employment in more than 20 widely diversified occupations including such areas as registered nursing, data processing programming, drafting, electronics, culinary arts, mid-management, pattern drafting and draping, chemical technology and dental assisting. About one-fourth of the students are majoring in these programs and the remaining three-fourths are enrolled in lower division transfer work.

As the suburban campuses open, many other occupational majors will be added, all geared to meet the most pressing training needs of the local manpower market.

New courses of study on the horizon include programs in the aerospace and automotive fields, metals, plastics and engineering technologies, air conditioning and refrigeration, horticulture, nucleonics, building construction trades, and expanded offerings in the business and medical-related fields.

The district has been invited by the Southwest Medical School to explore the possibility of establishing a Para-Medical Training Center adjacent to the medical school which is also the site of a major hospital complex and a future dental school. Such a center would house a wide variety of two-year technician level programs in the medical and dental fields.

Although the action was late in coming and the vacuum of training needs is great, Dallas County is now making rapid and substantial progress toward bringing opportunities for high quality higher education to all of its citizens.


BROOKHAVEN COLLEGE
RICHARDSON
RICHLAND COLLEGE
FARMERS BRANCH
GARLAND
LOOP 12
NORTH LAKE COLLEGE
IRVING
WHITE ROCK
EASTFIELD COLLEGE
TRINITY RIVER
MESQUITE
FT WORTH DALLAS TURNPIKE
EL CENTRO COLLEGE
GRAND PRAIRE
MOUNTAIN VIEW COLLEGE
MT CREEK LAKE
FUTURE IH 20
DUNCANVILLE
CEDAR VALLEY COLLEGE
LANCASTER

JUNIOR COLLEGE SITES • DALLAS COUNTY

MASTER PLAN SCHEDULE FOR DEVELOPING COLLEGES OF DALLAS COUNTY JUNIOR COLLEGE DISTRICT—FORECAST OF DEVELOPMENT BY ENROLLMENT (DAY COLLEGE FTE)

Zone	1970	1971	1973	1975	1977	1981	1985	1989	1993	20000
El Centro [1]	3,000	3,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	7,000
Eastfield	3,000	3,000	3,000	3,000	3,000	5,000	6,500	6,500	8,000	9,500
Mountain View	2,500	2,500	2,500	2,500	2,500	4,500	4,500	6,000	6,000	7,500
Richland		2,500	2,500	2,500	4,500	4,500	6,000	6,000	7,500	7,500
Brookhaven			2,500	2,500	2,500	2,500	2,500	4,300	4,300	4,300
Cedar Valley				2,500	2,500	2,500	2,500	4,500	4,500	6,000
North Lake					2,500	2,500	2,500	2,500	4,500	4,500
Total needed	16,000	17,500	19,000	20,750	22,500	26,000	29,900	34,000	38,300	46,300
Total Const	8,500	11,000	15,500	18,000	22,500	26,500	29,500	34,800	39,800	46,300
Deficit or surplus	−7,500	−6,500	−3,500	−2,750	--------	+500	−400	+800	+1,500	------

[1] Subject to preparing master plan for developing El Centro College.

Note: Each year listed at head of table indicates fall semester when facilities should be completed to accommodate indicated enrollment.

Source: Analysis of factors of growth, directions of growth, and spacing of colleges to serve the entire district.

Philosophy of the Dallas County Junior College District

The basic objective of the Dallas County Junior College District is to help students equip themselves for effective living and for responsible citizenship in a rapidly changing local, state, nation and world community. To achieve this goal, the college offers programs of post high school education which extend the knowledge and refine the skills of the students it serves. The Board of Trustees recognizes that colleges of the district must be responsive to needs of the community and that they have an obligation to make available to the community all the opportunities implicit in their functions as a community college. On the basis of these broad objectives, the board subscribes to the following specific concepts:

1. The junior college has a fundamental responsibility of providing leadership to the community in educational and cultural matters.
2. Every individual capable of continuing educational achievement should be given the opportunity, notwithstanding his economic level, to discover and develop his own special aptitudes.
3. It is the responsibility of the college to provide guidance service to all students, to help them reach mature and responsible decisions, whatever the nature of the problems they encounter.
4. High professional standards for the academic staff must be maintained within a framework prescribed by the board. High standards of scholarship and performance are indispensable features of the collegiate program.
5. A junior college, being a community institution, must be sensitive to changing community needs and adapt readily to those needs.
6. The specialized role of a junior college necessitates a range of offerings designed to aid each individual to attain a high level of cultural development, and a high level of technical competence.

Report and Forecast: AAJC's Occupational Education Project—After One Year the Goals Are Clarified and Expanded

(By Kenneth G. Skaggs, Douglas W. Burris, and Lewis R. Fibel)

In the early 1960's the Board of Directors and the staff of the American Association of Junior Colleges, reflecting a rising tide of concern from the membership of the Association, sought support for development of occupational education programs in junior colleges.

By the middle of the decade these concerns have become overwhelmingly important. Their essence is expressed very well by Grant Venn in *Man, Education, and Work*: "The two-year colleges in America, if they are to assume their proper and effective role in the educational system of the nation, should make vocational and technical education programs a *major part* of their mission and a *fundamental institutional objective.*"

It is this challenge to the junior college that prompted the Association to make its initial proposal to the W. K. Kellogg Foundation for support of programs in occupational education. The Association views its Occupational Education Project, now completing its first year, as a major part of *its* mission.

The Occupational Education Project staff, in its early days of planning, found common elements that aided in determining the direction of the program. These included curriculum and program development; leadership development; identification of information sources; and liaison with state and federal agencies, universities, junior colleges, foundations, professional and technical associations, and industry.

From these common concerns, from the initial proposal submitted to the Kellogg Foundation, and from the experience of the project staff, emerged goals for the five-year program that form the framework and the directional beacons for the work. These specific goals guided the first year's work of the project and shall continue to do so in the expanded program ahead:

1. To identify current and future needs in the areas of occupational education and to suggest techniques and procedures to accomplish the necessary research and study.
2. To provide for close liaison among professional organizations, agencies, and associations, and junior colleges, through the American Association of Junior Colleges, so that mutual understandings and acceptable relationships may be encouraged and articulation and coordination may be realized.

3. To supply appropriate articulation between junior colleges and four-year institutions.
4. To aid junior colleges in the study, development, and implementation of occupational programs relating to local and national needs, and to provide guidelines for such study, development, and implementation.
5. To serve as a source of information to the junior colleges for the establishment of courses and programs.
6. To help in the identification of sources of financial support available to junior colleges in the study, development, and establishment of programs.
7. To hold workshops, conferences, and institutes to strengthen occupational education programs and to give leadership to the effective establishment of such programs.
8. To identify leadership in the occupational education field and to develop a list of consultants available to groups planning the development or improvement of occupational education programs.

FIRST-YEAR ACTIVITIES

The first year of work of the Occupational Educational Project has been one of learning, planning, development, and progress toward the goals of the program.

Upon reporting to the Association, each of the staff specialists found a backlog of unorganized information, correspondence, schedules of meetings, and consultations. For the sake of organization and distribution of the work load, assignments were made to the staff as follows: business-related technologies, Douglas W. Burris; science and engineering related technologies, Lewis R. Fibel; health and paramedical technologies, Kenneth G. Skaggs. While these were the areas given emphasis in the work of the staff specialists, none of the three considered these assignments restrictive, but together group attention would be given to each of the areas and to other occupational education programs not clearly categorized in the assignments.

Activities and progress this year have been emphasized in the following ways:

1. In identifying manpower needs in many occupational fields. This involved conferences with representatives of numerous trade and professional agencies, and with officials in the various departments of federal and state governments, and the reading of reports and the compilation of data pertinent to the development of occupational programs in junior colleges. The Council on Hotel, Restaurant, and Institutional Education; the American Society for Engineering Education; the American Dental Association; the U.S. Department of Labor; the U.S. Office of Education; and the U.S. Public Health Service were among such agencies.
2. In providing liaison with other associations, agencies, and governmental departments. In addition to the meetings described above, there were many opportunities to represent the Association, its work and activities, and especially the work of the Kellogg project. These meetings provided for an exchange of information, for mutual planning, for interpreting the role of the junior college in occupational education, and for forming a continuing working relationship. These liaison opportunities included meetings with the American Vocational Association, the National League for Nursing, the Statler Foundation, and others.
3. In identifying occupational education programs appropriate to the junior college, and in providing encouragement for sound and effective curriculum development, junior colleges are receptive to the new programs in occupational education, provided they have clear understanding of the fields to be served, definitive skills needed by personnel graduated from the program, and guidelines for program development and operation. The staff specialists have met with junior college personnel, professional and trade personnel, visited individual campuses, accepted speaking engagements and consultative invitations, aided in planning conferences, provided necessary information for program planning, and encouraged effective procedure for curriculum development.
4. In establishing effective working relationships with professional, educational, and governmental agencies. With many of these organizations the relationships are on the staff level, as with the International Association of Chiefs of Police, the American Physical Therapy Association, the National Business Education Association, and others. Relationships of a continuing nature were also established through committees, councils, and conferences, as with the American Textbook Publishing Institute, the American Dental Association, and the American Society of Planning Officials. With some agencies and organizations, the

American Association of Junior Colleges formed joint committees with specifically defined projects as goals, such as with the National Health Council, the Council on Education of the Society of Clinical Pathologists (medical technology) and the American Library Association.

5. In developing publications helpful to junior colleges in planning occupational education programs. The most widely read publication of the Occupational Education Project is the *Occupational Education Bulletin*, published about every six weeks for a mailing list of over 6,000 names. Other publications that have been developed by the project staff are: *Paramedical and Health Related Programs in the Junior College: Some Questions and Answers* (report of an Alabama state conference), and *Emphasis: Occupational Education in the Two-Year College* (report of the Midwest Technical Education Conference). The project staff also aided in preparing materials for two other publications this year: *Statewide Planning for the Improvement of Associate Degree Nursing Programs* (Division of Community Junior Colleges, Florida), and *The Community College in Mental Health Training* (Southern Regional Education Board, Atlanta). Other publications are now in the developmental stage. One other publication for which the project staff has responsibility will be published this spring. Tentative title is *Guidelines for Consultative Services in Junior Colleges* (report on the conference for consultants). The project staff has also prepared articles for the *Junior College Journal*, and has assisted in the development of position papers for the Association.

As the staff views the close of the first year of the project program it is certain that much progress has been made. Each staff member has found professional growth in his area of emphasis, and has developed technical and procedural "know how" that will contribute toward making the work of the project even more meaningful in the months to come.

Junior colleges *have* been encouraged to investigate, plan, develop, and implement occupational education programs. There *have* been visible results. The junior college program has been interpreted to professional associations and agencies, and support has been obtained from many of them for the junior colleges. Awareness of the importance of the junior college in the nation's plans for educating and training needed manpower is being realized by governmental agencies. Helpful and stimulating publications in the field have been published or are being planned.

The staff feels strongly that the support given to this project has produced an impact on the junior college.

PLAN FOR FUTURE ACTIVITIES

During this first year of the Occupational Education Project, the project staff devised a further plan of action to assist with the development of occupational education programs in junior colleges. This plan would not supplant the current program and its previously mentioned activities, but would actually augment the activities of this first year's endeavor.

Included in this plan is a fourth field for major specialization and a number of workshops, publications, and conferences that will have a very tangible national impact. In implementing this course of action we are, of course, keeping in mind the need for flexibility.

The W. K. Kellogg Foundation, in support of this expanded program, has again offered its assistance to the junior colleges by supplementing its original $782,500 grant to AAJC with an additional $684,150 (See "AAJC Approach," page 5).

This new plan will enable the American Association of Junior Colleges to expand its assistance in the three fields of health-related curriculums, business-related curriculums, and engineering and science-related curriculums. In addition, attention will be given to a fourth field—public affairs and community services. Included in this field are such occupational specialties as: urban management technicians, police science technicians, recreation supervisors, environmental health technicians, traffic engineering aids, and welfare and family assistance workers.

The project staff gave attention to this area, but felt that there was such great concern on the part of public officials and junior college educators about the formulation of new curriculums in the public service field, that additional support was requested. The Association, therefore, with a portion of the additional financial assistance offered by the W. K. Kellogg Foundation, is in the process of establishing "public service" as a new field of study and specialization.

In addition, the expanded program will call for the publication of curriculum guidelines in occupational education; publication of monographs on service area needs in occupational education; consultant workshops; and regional workshop conferences for occupational curriculum planning and general program development.

In those fields of occupational education where definite curriculum guidelines have not been established, an innovative approach will, of course, be required. The Occupational Education Project staff will launch studies toward the creation of curriculum guidelines. Each occupational specialist of the AAJC staff will coordinate his efforts very closely with a small advisory committee of specialists from both education and industry. Examples of curriculum guidelines that could be published under this program are hospital-unit-ward management, hotel-motel-restaurant management, and instrumentation technology.

A number of service areas have been identified as useful to occupational education. There are inadequate materials in many of these areas. Included are about twenty-five areas for possible study such as the role of the advisory committee in occupational education, work experience programs for occupational education, occupational education-related legislation, occupational guidance and placement services, and development of staff for occupational education programs.

Under this program, as with the curriculum guide program, the Occupational Education Project staff member, with the assistance of an advisory committee, will assume the responsibility for a study which will be pointed toward a publication which will be made available to the field.

Under the third program, the project staff will hold a series of consultant workshops concerned with preparing specialists in a particular occupational education field to be ready to assist junior colleges with their occupational education programs. The agenda will include sessions on effective procedures to be used while working with junior colleges. Also included will be sessions to bring curricular information to consultants to use during their visits to institutions. A very impotrant objective of the workshops will be to involve professionals from industry and associations, who will act as resource people and work with the junior college specialists. The establishment of a dialogue between industry and education at the national level, as well as the local level, is extremely important to the success of these occupational education programs.

A fourth program under this expanded plan will include the conducting of annual regional occupational education conferences. In order to secure a definitive national impact and to gain full value from the studies and publications of the current year, it is most desirable to bring this information to the junior colleges. These regional conferences will help accomplish this purpose. It is the intention of the staff to conduct meetings, organized by members of the original consultant teams or advisory committees. The first day will be devoted to workshops involving current service area studies and publications, and the second day to specialized curriculum workshops from each of the programs introduced during the year. It is currently the thinking of the staff to extend invitations to those people involved at the operational levels of the junior college.

This plan suggests a vigorous schedule for the project staff. However, with the additional financial support from the W. K. Kellogg Foundation, it is the desire of the American Association of Junior Colleges and its staff to offer junior colleges the kind of leadership and services that will, in fact, have a positive impact on the development of occupational education curriculums.

STATE OF OHIO DEPARTMENT OF EDUCATION,
Columbus, April 12, 1967.

Hon. ROMAN C. PUCINSKI,
Chairman, General Education Subcommittee,
House of Representatives, Washington, D.C.

DEAR MR. PUCINSKI: As you may recall, it was my pleasure to appear before your General Education Subcommittee on April 13 in support of your bill on vocational education.

Since I have returned to Ohio, I have had an opportunity to read your opening remarks before the A.V.A. group, and was again impressed with your excellent comments in regard to the area of vocational education and your very capable way of expressing yourself.

It was my observation that you did an outstanding job in handling both the people testifying and the members of your committee. You kept the hearing pointed clearly at the key concerns of the committee and made us feel a sense of urgency in providing you with the best possible information.

I am particularly concerned that we have an opportunity to answer many of the patent unproven accusations made concerning vocational education. I attempted to relate concepts of vocational education to the modern concepts of eduation in a position paper on vocational education. I have taken the liberty of enclosing a copy of this position paper and one that I prepared on technical education with this letter.

As requested by a member of your Subcommittee, I am making a breakdown of the per pupil costs at Mahoning Valley and I will provide you with a breakdown of this information in several different ways. The way we had initially reported it to Congress followed the same manner in which the funding is requested from Congress by the Office of Economic Opportunity. We identified the amount of dollars expended per pupil enrolled in the programs. The budget for Job Corps under the Office of Economic Opportunity does not specify the length of training time to be provided to each student. The budget for the Job Corps divided by the number of students to be served at the time of our testimony in the spring of 1966 provided for not less than $7,888 per pupil. The figures that we had given were total program costs, including the equipment and remodeling costs in establishig the program. Data concerning these figures will be sent to Mr. Goodell on your Committee as he requested.

I wish that the people throughout the Nation had the opportunity to observe as I have the very professional manner in which their representatives handle their responsibilities in Washington.

If I can be of any further assistance to your Committee, please notify me.

Cordially,

BYRL R. SHOEMAKER,
Director, Vocational Education.

A POSITION PAPER ON VOCATIONAL EDUCATION IN THE PUBLIC SCHOOLS

(By Byrl R. Shoemaker, Director, Vocational Education, Ohio)

A definition or descripiton of vocational education could be worded as follows:

The primary purpose of vocational education is to equip persons for useful employment. The program is designed to serve the needs of people in two distinct groups. First, adults who have entered upon, and second, youth and adults who are preparing to enter occupations in agriculture, business, home making, distribution, trade, technical, and industrial fields requiring less than a college degree.

Vocation eduaction helps to give definite purpose and meaning to education by relating it to occupational goals. It provides the technical knowledge and work skills necessary for employment; but, it is more inclusive than training for job skills. It develops abilities, attitudes, work habits, and appreciations which contribute to a satisfying and productive life.

Vocational education contributes to the general educational needs of youths, such as citizenship, respect for others, acceptance of responsibilities; but, it makes its unique contribution in the field of the preparation for work. It is a part of a well-rounded program of studies aimed at developing qualified, efficient workers. It recognizes that the American worker should be competent—economically, socially, emotionally, physically, and in a civic sense.

The uniqueness of the vocational education program in our public schools is in its contribution to the skills and technical knowledge required for employment. Recognizing the needs of youth and adults for instruction in the field of occupations, no educational program or school can be classed as comprehensive unless the educational offerings include a comprehensive vocational education to serve youth and adults.

It is my belief that vocational education is not a discipline, but that it cuts across and draws content from a number of disciplines and from the practical work of the world. The contribution of vocational education is the blending of theoretical knowledge from the disciplines with the practical experiences and requirements of entry jobs, recognizing the nature of the world of work.

In vocational education we weave together the principles of mathematics and science, skills, and technical knowledge into a mix which will help youth and adults to enter and adjust to employment opportunities or to upgrade themselves in their chosen field of work.

A preparatory program of vocational education is essentially a "core" program built around the "pegged-core" concept of Dr. Alberte, Professor Emeritus, Ohio State University. The program makes significant use of the concepts or principles of learning which point out the importance of relationship of knowledge taught to effective use by the student of such knowledge.

Some principles of learning serving as the basis for instruction in the field of vocational education are as follows:

1. We learn best when we are ready to learn. When we have a strong purpose, a well fixed reason for learning something, it is easier to receive the instruction and to make progress in learning.
2. The more often we use what we have learned the better we can perform or understand it.
3. If the things we have learned are useful and beneficial to us, so that we are satisfied with what we have accomplished, the better we retain what we have learned.
4. Learning something new is made easier if the learning can be built upon something we already know. It is best to start with simple steps which are related to things we can now do or which we already understand, and proceed to new and more difficult tasks or ideas.
5. Learning takes place by doing. Before the learning can become complete, we must put into practice what we are attempting to learn.

It is my opinion that the most significant contributions of any of the social sciences to the field of vocational education have come from the field of psychology.

Vocational education is not the total answer to the over-all unemployment problem brought about by cyclical and structural changes in our employment pattern. Vocational education is one of the answers for unemployed individuals who wish to prepare to re-enter the labor market, and for youths in high school or post-high school levels who are preparing to enter the labor market for the first time.

I would predict that when the answer to the problem of unemployment is found, vocational education will have a prominent part in the solution. This prediction is based upon the concept that the new technological revolution brought about by automation has placed a premium upon preparation in skills and technical knowledge for new jobs, and has diminished the need for the unskilled worker.

As the governmental unit in our society works frantically to develop the "Great Society," a greater and greater reliance is being placed upon the concept of education as the only ladder out of a continuous poverty cycle.

Secretary of Labor Wirtz made this challenge clear as he made this statement before the general subcommittee on education in the National Congress:

"There was a place in the old work force for the boy or girl who left high school, either dropping out, or with a diploma in hand, and entered the work force with no skilled training. He or she could, and did take an unskilled job and worked up from there. Now, such jobs are vanishing, and so, today, there are 700,000 sixteen to twenty year olds out of work and out of school. Every American youngster has to be given today, as a part of his education, some know-how about making a living, which means for a great many of them, vocational education."

A review of a June, 1965, report on unemployment in Ohio reveals that when the unemployment of males is considered by each age category, the largest percentage of unemployment exists within the youth between the ages of sixteen and twenty-four, and that the vast majority of the unemployed in this category are classed as unskilled workers. This points up the great need in the youth group for preparatory training for employment.

The need for upgrading courses for employed workers is in evidence, particularly for the worker thirty-five years of age or older. Both upgrading and retraining courses are important for the worker in the forty-five years of age and over category.

Looking at the pattern for women, we find again that unemployment is highest among the unskilled youth group. A review of the unemployed youth pattern would indicate that there is a need for training girls in occupations other than clerical and business occupation. Other occupations, however, such as cosmetology, dental assistants, medical assistants, laboratory assistants, and technical areas such as food service and food management, child care, etc., should be given consideration for the training of girls and women.

The pattern of employment and unemployment for women points up the need for the retraining of persons who are reentering the labor market at about age thirty-five. There is little indication, however, of the need for the training of older women workers, since they seem to retire earlier than men, or else do not change jobs as an older worker.

Reports from both the Ohio State Employment Service and the United States Department of Labor point out that the jobs available between 1960 and 1970 and subsquent periods of time will require skills and technical knowledge, and that the unskilled person earning his living with his back is in danger of becoming obsolete.

It is a professional person's desire, and an administrator's obligation, to project his plans as far in the future as possible. I find it difficult, however, to talk now about the preparation of youth or adults for jobs to be available in 1975. It is true that for some the academic studies will enhance their chances of employment. The problem, however, is stated succinctly by Grant Venn in the book entitled Man, Education, and Work, published by the American Council on Education.

"Their assumption seems to be that the best and only necessary preparation for a job today is the longest possible immersion in academic and professional subjects.

"This assumption at once fails to heed the factor of youth unemployment and misapprehends the relevance of general education. The liberal, or academic, studies do enhance the long-range civic and occupational competence of a person: they do not, at least below the baccalaureate degree level and as a rule, qualify young people for meaningful job entry. The technological work world is one of specialization and sophisticated skills, and being a 'bright young man' cuts relatively little ice with employers looking for skills to do some specific kind of work."

It is impossible for me at the present time to project the job pattern in 1975; but, it is within my range of abilities to provide for sound entrance programs today, and to encourage a flexible curriculum, flexible facilities and flexible program offerings for those vocational education programs now functioning within our State.

The term "flexibility" has become quite popular and, in too many cases, may mean the concept of lowering the investment of time by the student in a program of vocational education in order to enhance his opportunities to enroll in courses of mathematics and science and other related disciplines. There is a real question as to whether this type of flexibility improves either his vocational education or his abilities in mathematics and science.

The Division of Vocational Education, in cooperation with the Ohio State University, has completed two research studies involving the question of depth of training for students enrolled in vocational education.

From the one study, it is evident that students enrolled in depth programs of vocational education in the trade and industrial field achieved significantly higher scores on trade achievement tests than did those students who were enrolled in programs requiring less of the students' time for vocational education and making available a greater portion of the students' time for liberal and academic studies.

A further study of the report reveals the fact that students enrolled in a more flexible program requiring less time in the vocational areas do not achieve more in the area of mathematics and science than those who continue in depth programs of vocational education. To the contrary, those students who remained enrolled in depth programs in vocational education showed a significantly higher achievement in understandings of principles of mathematics and science than did the students in the more flexible programs.

Too often the value of a sound vocational education program to the total educational process has been overlooked by those imbued with the concept that the college preparatory curriculum is the "general education" curriculum that all students can and should follow. The contribution of vocational education to the total curriculum is alluded to by Dr. Conant in the January issue of "Changing Times." Dr. Conant was asked the question, "Dr. Conant, suppose that one or more of the children in a family are not interested in going to college?" His answer was, "Along with its academic courses the high school should offer a vocational program. Thus, a boy could develop an occupational skill which would interest him such as automobile mechanics, tool and die work or carpentry. This would also stimulate him to learn mathematics, history, social studies and English, since he would now see the point of it all. Girls might take such courses as stenography, typing or home economics."

The research study reported earlier in this paper has indicated that the interest and growth in the areas of mathematics and science takes place under the following conditions:

1. The instruction is a required part of the vocational program.
2. The instruction is provided in a block of time separate from the skill instruction but correlated with such skill instruction.
3. The students are taught in homogenous groups according to the occupational area which they are studying (i.e. machine trade, auto mechanics, etc.).
4. The principles of science and functions of mathematics are taught in relationship to the real problems in the occupation for which the student is preparing.
5. The principles of science and the functions of mathematics are selected on the basis of applicability to the occupational area and taught at the "applied" rather than "proof" level.

The report from one large city indicated that less than fifteen percent of the students were enrolled in the higher mathematics and science courses at the eleventh and twelfth year level. A much higher percentage of the students will need mathematics and science following graduation. Not all students who need mathematics and science need the "proof" type of instruction provided in the college preparatory mathematics and science programs. The students who are not going on to college do not have the goal orientation necessary to encourage success in the college prep classes and many do not have the aptitude or ability to succeed.

Often the next obvious solution attempted is the establishment of "general," "shop," or "applied" mathematics courses which place all students not in the college preparatory courses into classes together or all vocational students in such common courses. The history of such courses has been poor. The goal orientation in such clases is no more clear for the students not planning to go to college than in the college prep courses, even though the content may be functional or applied. Functional in what way? Applied to what? What does the boy in an auto mechanics vocational program care about the functions of trigonometry as applied to the machine trade. As a matter of fact, why should the boy in auto mechanics be required to learn the functions of trigonometry? Unused knowledge is soon forgotten and the auto mechanics student has no use for trigonometry.

Vocational education should not be considered principally as a means to teach principles of mathematics and science but as a program which incorporates them in reaching a goal of preparing to live and to earn a living. Vocational programs prepare students for entrance into a family of occupations, not into "a" job. As an example, vocational training in the auto mechanics field would be basic to approximately 750 of the jobs listed in the occupational handbooks. A comprehensive vocational program will offer a wide variety of programs to meet the interests and abilities of the students at the high school level and the out of school youth and adults. A minimum comprehensive program would include:

Three different agriculture programs,
Three different business and office programs,
Two distributive education programs,
One job training area relating to home economics,
Five trade and industrial education programs.

The following program of vocational education included in the Penta-County Joint Vocational School District would be considered a desirable or optimum comprehensive program.

High school programs

A. Agriculture:
   1. Training for non-Production Agricultural Occupations.
   2. Vocational Horticulture.
   3. Advanced Farm Businss Management and Accounting.
   4. Advanced Agricultural Equipment and Mechanics.

B. Business Education:
   1. High Skill Steno/entry Secretarial 11–12.
   2. Account Clerk 11–12.
   3. Entry Business Data Processor 11–12.
   4. Office Machines Operator 11–12.
   5. Cooperative Office Education (12th only).
   6. Office Reproduction Specialist 11–12.
   7. Intensive Horizontal Business Office Education (12th only).

C. Distributive Education:
   1. Retail Selling, Buying and Pricing of Merchandise and Personnel Management.
D. Home Economics:
   1. Child Care Assistant.
   2. Child Care Worker.
   3. Homemaker's Assistant.
   4. Dietary Aide.
E. Trade and Industrial Education:
   1. Machine Trades.
   2. Auto Mechanics.
   3. Auto Body Repair.
   4. Cosmetology.
   5. Drafting.
   6. Electrical Construction.
   7. Commercial Art.
   8. Carpentry.
   9. Dental Assistant.
   10. Medical Laboratory Assistant.
   11. Industrial Electronics.
   12. Welding and Sheet Metal.
   13. Commercial Foods.
   14. Printing.
F. Occupational Work Experience Program.

Technical college

Data Processing Technology.
Chemical Engineering Technology.
Electrical Engineering Technology.
Mechanical Engineering Technology.
Civil Engineering Technology.
Tool and Manufacturing Engineering Technology.
Welding Engineering Technology.
Accounting.
Food Service Management.
Wholesale Management.
Others.

One other research study, also concerned primarily with the area of trade and industrial education, points up the factor of the importance of competence in occupational skills and knowledges on the part of the teacher in the area in which he is teaching as being the one teacher-factor making a significant contribution to student achievement. Other significant findings of this research are:

1. The expenditure spent per student in Ohio's trade and industrial programs as viewed in this study was a significant contributor to student success. The amount spent per student in the high-achieving groups was over $100 more than the amount spent per student in the low-achieving groups.

2. Teacher personality, in terms of self-concept, is an indicator of how students will achieve. Teachers of the high-achieving groups displayed a higher Intellectual Quality concept than did teachers of the low-achieving groups.

3. Local supervisors' ratings of teachers are significant indicators of quality learning situations.

4. Teacher age, grade level completed, years of teaching experience in present trade, total teaching experience and degree held do not appear to be significant factors in student success. Teachers industrial experience is a significant positive factor in relation to student achievement.

5. Trade and industrial education teachers are considerably more motivated than the normal population.

6. Student intelligence is a factor in trade achievement; however, some of the low-achieving schools reported mental maturity scores at or above those of the high-achieving schools. The teacher and the environmental factors also contribute to the differences found in the students' achievement.

7. Teachers who are creative, as measured by the Opinion, Attitude and Interest Survey, are typically rated by local supervisors as poor or poorer performers. Students of teachers who are identified as creative but have low Intellectual Quality scores achieve at a lower level than do other students.

8. Facilities as evaluated by area supervisors are a factor in quality programs. Shop space and equipment are essential for quality performance by students.

There are those who suggest that the problem of training students ought to be turned over to the industries. Such statements lack an understanding of the competitive nature of modern industry and business and underestimate the ability of the public educational sector of the total education program to provide instruction for entry into business and industry and upgrading courses for employed workers on a reasonable basis from the standpoint of both cost and effectiveness.

One indication of the unwillingness of business and industry to train an adequate number of workers for their employment needs is evidenced in the area of apprenticeship training. It is estimated by the United States Department of Labor that a total of five million new skilled workers will be needed between the years of 1960–1970. The industrial pattern for training these people within industry is the apprenticeship training program. At the present rate of training through qualified apprenticeship training programs, there would be a shortage of half million a year over each year of the projection.

Vocational preparatory training, upgrading, and retraining can be done effectively and economically through the public education sector of our society. The modern vocational education programs will be characterized by flexible facilities, and evolving curriculum, up-to-date equipment, a broad preparatory vocational-technical program at the high school and post-high school levels, a continuing educational program for upgrading of employed workers, a continuing retraining of the unemployed workers, and last, and perhaps most important, a competent staff and leadership to assess the needs and to adjust the programs.

A POSITION PAPER ON TECHNICAL EDUCATION

(By Byrl R. Shoemaker, director, Vocational Education, Ohio)

Throughout the years, changes in occupations have been brought about by social, economic, and industrial changes. Most such changes have effected the further division of existing occupations, based upon the increased knowledges, skills, and work assignments in such occupations. In certain cases, changes have been brought about by the introduction of entirely new products or processes in our economy.

Up until the middle ages, the professional, skilled, and semi-skilled occupations often were all represented in one person. As an example, the stonemason of Biblical times was his own architect, engineer, contractor, supervisor, and skilled worker.

As our society became more complicated, certain professions began to take shape in the nature of medicine, law, and religion. Preparation for the professions often was extremely crude, and the apprenticeship pattern established by the guilds of medieval times was often recognizable in the preparation of the professional.

At the time of the industrial revolution in the 1800's the concept of professions had been rather well accepted and collegiate preparation made available for a limited number of professions.

As a result of the industrial revolution, a division of labor developed in almost every skilled craft. The number of machine functions to be performed and the division of labor between these machines made it possible to use a person with less training than that of a skilled craftsman. In many cases, the functions served by man required little skill. Man became subservient to machines, providing for the needs of the machine, in regards to feeding it material and hauling away the finished product.

As a means of encouraging the professions in engineering and agriculture, the land grant colleges made possible by the Federal legislation of the 1860's made possible the establishment of colleges throughout the Nation for agriculture and mechanical arts. The number of professions were expanded. The training of the professional included practical as well as theoretical training.

The employment of scientists in industry was almost unknown up until the beginning of World War II, with the scientists developing slowly under the aegis of governmental projects.

The shortage of skilled workers encouraged by the division of labor during the industrial revolution became obvious to business, industry, and government in the early 1900's, and resulted in the passage of the Smith-Hughes Act of 1917. This Act was planned to encourage the further development of craftsmen and other skilled workers.

As we entered the technological revolution at the close of World War II, we found a need for another major change in the occupational pattern of our Nation, pointing toward the changes needed in the area of education. Under the industrial revolution, man became subservient to machines; in the technological revolution, man became the master of machines. As we look to trends in employment, we find that industry, as well as government, is now willing to invest in scientific research, and the scientist level of occupations have become well established.

Changes in the technological revolution have brought about changes in engineering and other professions. We find that the engineers have been pushed more and more into the realm of the theoretical, forcing them to drop some of the activities performed previously by engineers, thus forcing a change in the pattern of engineering education. As an example, in one of our large universities civil engineers are no longer taught surveying, since they do not expect the civil engineer to go out into the field and actually do surveying work.

In the 1930's it was common for an engineer to have to spend five years at the drafting board before he could have an opportunity to work in true engineering. Today, the college of engineering in one of our large universities does not give the engineering student any course in drafting. Three dimensional concepts are taught and engineering graphical methods are reviewed, but skill is not developed. Any engineer that would spend five years on a drafting board before moving into the engineering field would have to go back to school, because of the changes that had occurred in that field.

The automatic control of the machines, the application of pneumatics, hydraulics, and electronics to industrial and business practices has caused a decrease in opportunities for employment in the skilled and certain of the semiskilled occupations, with projections for the need of skilled workers on the increase. This increased emphasis on the preparation of skilled workers, however, has not solved the problem of the vacuum created as we have pushed the engineers and scientists more and more into the realm of the theoretical.

As the theoretical facet of engineering and other professional education has increased, the level of ability necessary to succeed in this professional field also has increased. This fact, along with the limited number of college openings available in comparison with the large number of youth wishing to enter such colleges, has caused a condition in which some young people who might have graduated from college in the early 30's will not have the opportunity to complete college in today's market because of the increased level of ability required.

High competition in industry today also suggests that industry must make effective use of not only materials and machines with regards to production, but, also the professional and skilled manpower available to them. On the basis of changes in the professional occupations, on the basis of the need for economic use of people, in business, industry, and agriculture, and on the basis of the needs of people for opportunities to work at their highest level of ability, we see the need for the development of a new level of occupations in industry to fill the vacuum created by the upgrading of the engineering profession and a new level of education to prepare such people for such jobs.

It is proposed that this new level of education be called technical education. Up to this point we have used the engineering field as an example affected by scientific, economic, and social changes. The same development could be traced in the areas of business, distribution, health, agriculture, and the social science fields.

While the history of technical education is almost as long as that of engineering type education, we find that in the first large study of technical education in 1931 by the Society for the Promotion of Engineering Education, only eighteen schools were listed as providing full-time day courses. My personal experience with two of the eighteen listed indicated to me that at that point, the concept of technical education was closer to that of a crafsman than found in today's technical education programs.

One of the greatest problems in the evolvement of a sound technical education program has been the wide disagreement as regards the use of the term technical education. As a part of the community college development in California, there is a broad growth of areas of education called technical education, but, often the term technical education became connected with the granting of an associate degree and many things such as cosmetology, automotive repair, or practical nursing could be included in a curriculum leading to an associate degree. In too many cases, programs called "technical" led either to highly skilled occupations of a craft nature or the programs became an excellent preparation for entrance into a professional engineering program.

Most all of the early technical institutes were concerned only with the engineering technician, and technical education as a whole throughout the Nation has been slow to accept a concept relating to the needs in business, agriculture, distribution, health, and the social sciences.

Personal visitations to several technical education centers in the late 1950's revealed that some were concerned mainly with the preparation of youth to enter further education at the collegiate level, some were attempting to upgrade the status of their vocational education programs by calling them technical, and that some had identified a new level of education and were preparing young people for entrance into such employment.

Erie County Technical Institute at Buffalo, New York, housed at that time in an old abandoned automobile office building, demonstrated a concept of technical education different from professional or craft education, which provided for the entrance of 90% of their people into technical occupations as support personnel for professional people and an understanding that technical education was more than engineering aid education. The curricula were concerned with the 90% entering technical occupations upon graduation, rather than the 10% who would be going on to professional education at a college or university. The Ohio Mechanics Institute at Cincinnati also demonstrated in their Ohio College of Applied Sciences section the same concept of technical education as demonstrated in Erie County, Buffalo, New York.

Visitations to so-called high school technical education programs, which are not misnamed vocational programs, has indicated that such programs tend to become engineering college preparatory programs, rather than programs to prepare students for entrance into the technical occupations.

Without assistance from education the technical occupations in business and industry have continued to grow, with people falling into such technical occupations from the professional level, on the basis of misassignment, misuse of talent, or inadequacies on the part of the individual, or the jobs have been filled with people who stole into the jobs from the skilled or craft level. As an example, a person that I know trained as a tool and die maker, left the trade and worked at several tool design jobs until he gained sufficient skills and technical knowledge to do tool design work, and is now serving as a supervisor in the tool design section of a large company.

Many professional people used to, and still do jobs that do not require the highest level of their professional training. As long as professionals in any field of work are in surplus supply, professionals will resist any attempt to prepare persons to do any part of the job which they are now doing. As professionals become in short supply and they are encouraged and permitted to work at their highest level of employment, there is an immediate need for a group of people to work along side of the professionals doing tasks which require an educational level less than that of the professional.

Education is a service area, a service to people, to business, industry, and to government. Education tends to follow the identification of need on the part of the social and economic facets of our economy. Often the economic and social facets of our economy do not communicate well with the educators concerning the needs and educators are notaby unwilling to change status quo and to move into new fields of endeavor. There is at present, however, an apparent need for an area of education new to Ohio; an area of education more practical than the professional and more theoretical than that of the craftsman; a new area of education, not a watering down of professional education, and not an upward extension of trade or vocational education; a new level of education to prepare for new levels of employment in business, industry, agriculture, distribution, health, and the social sciences, to prepare persons to work as para-professionals in a team relationship with a professional. This need is based on the concept of the increasing requirements in the professional field, changes in assignments in the professional field, and the shrinking number of professional people per thousand of population.

Technical education is a level of education that is growing in keeping with our technological revolution and with the changing needs of both people and industries and businesses in our economy. This level of education is planned to prepare para-professional people in two-year post-high school programs to support the professional people in engineering, business, agriculture, distribution, health, social science, and public service occupations.

Such para-professionals can be prepared in two-year post-high school technical programs to work in a team relationship with both the professional people and people at the skilled or vocational levels of employment.

Technical education is concerned with design, development, testing, supervision, or mid-management functions. The technician does not replace the professional person or the skilled worker. The technician does, however, enable the professional person to work at his highest level of education and enables the skilled worker to function effectively and economically through coordinative and interpretive functions served by the technician between the professional and the skilled worker.

A team relationship in the industrial employment area might involve the following:

Professional—Mechanical Engineer.
Technical—Tool and Die Designer.
Skilled—Tool and Die Maker.
Semi-Skilled—Drill Press Operator.

A team relationship in the business employment area might involve the following:

Professional—Accountant (College Graduate).
Technical—Business Data Computer Programmer.
Skilled—Unit Record Operator.
Semi-Skilled—Clerk.

Examples of technical education programs

Engineering:
1. Mechanical Technology.
2. Electrical Technology.
3. Electronic Technology.
4. Chemical Technology.
5. Metallurgical Technology.
6. Civil Technology.

Home Economics:
1. Dietary Technology.

Health:
1. Dental Hygiene.
2. Dental Laboratory Technology.
3. Medical Laboratory Technology.

Business:
1. Computer Programming Technology.
2. Junior Accounting Technology.
3. Office Management Technology.
4. Executive Secretary Technology.

Distribution:
1. Wholesale Management Technology.
2. Retail Management.
3. Restaurant Management Technology.

Agriculture:
1. Agriculture-Business Technology.
2. Agriculture Equipment Technology.
3. Food Processing Technology.
4. Animal Science Technology.
5. Dairy Technology.

If one accepts the concept of technical education as a level of education, it then becomes necessary to provide it a rightful place in the total program of education. Because of the evolutionary nature of technical occupations, some misconceptions have grown up which make it difficult for technical education to take its rightful place as a new level of educational service in our educational organization.

Since some people became technicians by reason of upgrading of certain skilled workers or craftsmen, and because of the highly skilled nature of certain of the craft occupations, technical education has sometimes been confused with vocational education and the concept presented that technical education is vocational education with a little more technical content.

On the other hand, because of the relationship of technical education to the professional and the fact that some professional people are working in technical occupations or performing technical functions as a part of their occupations, some want to adjust downward the content of some professional programs and still give college credit for such courses in order to assure status and level, although it is not clear to what professional area the college credit would apply.

It is our belief that technical education emerging as a new field of education will prepare people who are related to both the skilled craftsman and the professional, but, should prepare the individual through a curriculum unique to his needs, rather than an upgraded or downgraded curriculum planned for another level of occupations.

On the basis of the concepts expressed in this paper, the Division of Vocational Education of the State Department of Education arrived at a framework for technical education. Recognizing that the technician is mainly concerned with design, development, testing mid-management, and supervision, and recognizing the importance of the ability of the technician to communicate with the craftsmen, with professionals, and with the public, the State Board of Education upon recommendation by the Division of Vocational Education approved the following standards for technical education:

Qualifications of instructors

Faculty qualifications shall include:

A. Faculty members should be competent in the field in which they teach, normally holding the baccalaureate or higher degree in fields of concentration appropriate to their teaching assignments and have at least one year employment experience in a technical field related to their area of instruction.

Technical competency in the field gained through five or more years of experience may be substituted for baccalaureate degree work.

B. Department chairman or persons responsible for curriculum planning and supervision must hold the Master's degree or other advanced preparation and experience in an appropriate field of concentration.

C. A minimum of 60% of the curriculum for both day and evening classes should be taught by faculty members who devote their full time to teaching and/or administrative responsibilities at the institution.

D. A significant proportion of all faculty members should have had recent experience in industrial, business, distributive, or professional practice pertinent to the technologies which they teach and such experience should be kept up-to-date through professional association, consultative practice, and individual reading and research.

E. Faculty members should be provided in numbers which will assure adequate attention to individual students.

F. All professional personnel must meet standards for certification of the State Department of Education. Special certification blanks are available for this purpose. Persons qualified by reason of professional training and experience in their field of specialization are provided with pre-service and inservice education covering teaching theory and methods.

Time schedule

Each technician training curriculum shall operate in conformance with the following general time distribution for both part-time and full-time students:

A. *Special laboratory and related technical subjects.*—A minimum of 50% of the total instructional time for the program shall be devoted to specialized laboratory experiences and related technical subjects in such things as engineering layout, electronic theory, machine design, chemistry, physics, mathematics, metallurgy, business principles, management functions, business or secretarial procedures, production methods, and analysis of materials.

B. *Basic laboratory experiences.*—A minimum of 15% of the total instructional time for the program shall be devoted to basic laboratory or manipulative experiences in the use of such things as equipment and instruments, hand and machine operations, blueprint reading, drawing, sketching, display, ad layout, etc.

C. *Communicative and leadership subjects.*—A minimum of 20% of the total instructional time of the program shall be devoted to the development of skills in oral expression, written forms of communication, graphic forms of expression, human relations, supervisory techniques and other leadership development skills.

D. The remainder of time (15%) shall be distributed according to the need of the area of instruction.

Length of course

Courses of instruction shall be two years in length when conducted on a full-time basis. Such programs may be operated for a longer period of time when on a part-time basis. A minimum of 25 class and/or laboratory hours per week for a period of 36 weeks shall be considered an academic year. With some types of technologies, it may be more desirable to develop a curriculum of 1800 hours (or its equivalent in credit hours) for a two-year program. (For our purposes, three hours laboratory equals one credit hour and one hour equals one credit hour with two hours outside work for a five-day week.)

The organizational patterns under which technical education is provided vary widely throughout the Nation and also within our State of Ohio. While almost any organization pattern can be proved successful in some section of the Nation, such organizational patterns must be reviewed with regard to the total educational pattern within a State and in terms of the concept of technical education described earlier in this paper.

The most common organizational patterns and some of their strengths and limitations are described as follows:

A. *Vocational and technical education center functioning under the joint vocational school district law, administered by one joint vocational school board of education with one tax authority for both vocational and technical education.*—Under this arrangement the local taxing authority is required to pay a portion of the building costs and operating costs. The program operates under the supervision of and receives reimbursement from the State and Federal agencies through the State Board of Education. The law permits the Board of Regents to review the technical program and to grant the associate degree if the technical programs meet their standards.

Possible Strengths—

1. On tax base and taxing authority for both the area vocational and technical education programs.
2. One board of education to administer the two programs.
3. Possible savings in administrative costs for direction and supervision.
4. Possible savings in costs of materials and supplies.
5. Dual use of certain expensive laboratory facilities and of certain common service centers, such as heating, cafeteria, laboratories, etc.
6. A service center providing a continuing education in non-baccalaureate degree education, starting with vocational education at the high school level, and with provisions for vocational and technical education of a preparatory and upgrading nature on the post-high school level.
7. One relationship with industry for programs in which their advice and counsel must be sought on a continuing basis.
8. Technical education becomes a premium program in this organizational pattern, since it is the unit of highest status.
9. Emphasis in technical education in this organizational pattern tends to remain focused on its purpose of preparing youth for entrance into technical employment rather than upon continuation toward a baccalaureate degree.
10. There is less chance for the programs to become inclined toward a duplication of the first two years of a baccalaureate degree program.
11. The administration of the program will be in the hands of people concerned with vocational and technical education rather than baccalaureate degree education.
12. The local control inherent in this organization will encourage adjustment of the programs to meet the needs of both people and business and industry.
13. Local funds assist with both the construction and operation of the program.
14. Technical education is placed within a reasonable driving distance of the homes of the students.
15. Due to local and State participation in the construction and operation, the cost of technical education to the student is maintained at a reasonable rate.

Possible Limitations—

1. The State Board of Regents is reluctant to approve the granting of the associate degree to any educational agency except those operating

under the control of an institution of higher learning or operating under the direct administrative supervision of the State Board of Regents.

3. Under this arrangement technical education must be sold to students on the basis of the merits of a technical education program without the stimulation that occurs when students believe they are enrolling in a baccalaureate degree program.

3. Students from such programs will not automatically acquire baccalaureate degree credit, but, must have their credits evaluated by an institution of higher learning if they decide to go on to a baccalaureate degree program.

4. The present organizational pattern at the State level involving the State Board of Education and the State Board of Regents presents a problem of relationships when cooperative efforts of this type are established.

B. *Technical Institutions.*—Under Ohio law, separate technical institutes can be organized under the Board of Regents to provide for post-high school technical education. Under the law, these technical institutes become a separate administrative unit, with a tax authority separate from any other educational unit in the city, county, or counties covered by the technical institute district. Such institutes are established, assisted financially, and supervised by the State Board of Regents.

Possible Strengths—

1. The purpose of the institute is clearly in the area of post-high school technical education.
2. Under this plan there would be a single administrative organization.
3. The technical education program is the premium program in the institute, since it is the only program.
4. The administration of the program would be concerned primarily with technical education.
5. Relationships can be established with business and industry with regard to this facet of education.
6. The element of local control will encourage the adjustment of the technical education program to both the needs of people and the needs of business and industry.

Possible Limitations—

1. Establishes a separate tax authority for the same tax base as that established for a joint vocational school district.
2. Requires an administrative organization specifically for this one type of education.
3. Certain of the laboratories needed for short periods of time are expensive for use for this one purpose only.
4. There is a duplication of certain laboratories and shop facilities included in a joint vocational school.
5. A curriculum developed with transferability in mind will likely not produce quality technical education.
6. There is a history of the desire of such technical institutes to become four-year degree granting engineering centers.

C. *Community Colleges.*—Community colleges in Ohio are organized under the Board of Regents to provide baccalaureate degree programs and technical education programs. Both the transfer collegiate curriculum and the technical education curriculum lead to the granting of an associate degree upon completion of a two-year program. Such community colleges also may offer short-term courses during the day or evening for part-time or special students to serve the needs of both people and business and industry.

Possible Strengths—

1. The community college is community oriented and will give careful consideration to the interests of people and of business and industry in the areas served.
2. The community college provides partial local financing for both construction and operation.
3. Technical education is placed within a reasonable driving distance of the homes of the students.
4. Due to local and State participation in the construction and operation, the cost of technical education to the student is maintained at a reasonable rate.

5. Costs of administration for a college transfer program and the technical education program are reduced by reason of the one administrative board.

6. Under this plan there would be a single administrative authority.

7. The program remains responsive to changing needs within the local area.

Possible Limitations—

1. A curriculum developed with transferability in mind will likely not produce quality technical education.

2. The community college represents a separate tax authority which may be in addition to a joint vocational school district, and could be in addition to a branch university center.

3. Such community colleges may tend to grow into four-year collegiate institutions, in which cases the two-year technical programs receive less emphasis, since the emphasis tends to be placed upon the professional areas.

4. On the basis of the law of social gravity, finances and emphasis in a community college tend to move toward a collegiate transfer program, rather than a technical education program. Also, enrollment tends to follow the law of social gravity unless the students in the technical programs are pacified by the granting of baccalaureate degree credit for the curriculum completed.

D. *University Branches.*—The university branch is a local part sponsoring university, but located in a different urban areas. The purpose of the branch university is to decentralize the lower divisions of instructional activities in a State assisted university. The university branch is tied to and administered by the parent university and the programs and standards are expected to be those of the parent university. The university branches can legally offer technical education programs.

Possible Strengths—

1. Technical education students who change their goals and decide to pursue baccalaureate degree programs may find it easier to obtain recognition of course credits by the parent university.

2. The status symbol attached to the university will tend to encourage enrollment of students into the programs, many on a part-time basis.

3. The administration and funding of the branch is provided through the parent university under the direction of the State Board of Regents.

Possible Limitations—

1. The tendency in the branch is to organize technical education on the basis of courses offered in the lower divisions of the baccalaureate degree programs.

2. If the baccalaureate degree standards maintained at the central campus are maintained at the branch, many students who could succeed in technical education will be denied entrance or be unable to achieve at an acceptable level.

3. A number of students will enroll in the technical education curriculum on the basis of the status symbol of the university, believing they are enrolling in a university program. Such students will have little interest in preparing for a technical occupation upon graduation. A great number will enroll on a part-time basis and will never plan to graduate.

4. Most university branches are not adequately equipped with the necessary laboratories and shop facilities to provide for a sound technical education program.

5. Finances available to a university and to a university branch will tend to flow to the programs of highest status, the transfer programs in the branch and the graduate programs on the parent campus.

6. There is a tendency for programs in the university branch to be central campus oriented, with little direct contact in relationship with business and industry in the local area to be served, and close relationships with business and industry are necessary for the further development of sound technical education programs.

7. Since the status programs are transfer programs, enrollment in the technical education programs would generally decrease as students feel they are secondary citizens in relationship to the transfer programs.

E. Colleges and Universities. Technical education programs operated by universities and colleges tend to have the same possible strengths and possible limitations as identified for the university branch.

In selecting the pattern for technical education in Ohio, it is necessary to examine the present educational pattern, trends in educational organization, economy of operation, the possibility of maintaining sound purposes and goals in terms of technical education, and the long-term necessity for the development of technical education as a new level of education to serve people, business, industry, and agriculture.

While some diversity in organizational patterns and policies can assist with the development of technical education in Ohio, the needs for the further development of technical education call for clarification of concept, clarification of organizational pattern, and a greater investment of Federal, State, and local funds in this important area of education.

OFFICE OF ECONOMIC OPPORTUNITY,
EXECUTIVE OFFICE OF THE PRESIDENT,
Washington, D.C., April 13, 1967.

Hon. CARL D. PERKINS,
House of Representatives,
Washington, D.C.

DEAR CARL: This is in reference to your inquiry about Job Corps' familiarity with the program operated by the Mohoning Valley Vocational School in Ohio. Mohoning Valley has been cited as having a program similar to Job Corps, but one which is supposedly operated more efficiently and economically. I am pleased to provide you with our view of the Mohoning Valley program.

The evaluation of the relative efficiency and effectiveness of various anti-poverty programs is one of the more difficult tasks that we in the Office of Economic Opportunity have undertaken. We have found that the Mohoning Valley Vocational School had to overcome a "dropout" problem similar in magnitude to the problem experienced by Job Corps. However, we found many characteristics which would preclude one from making reasonable comparisons of the effectiveness and efficiency of the two anti-poverty programs.

For example, the enrollees differ. The Mohoning Valley enrollees have completed on the average of 8.4 grades of school and have attained an average reading level of 6 to 7 grades. These enrollees, while unemployed, are considered by Ohio educational officials to be readily trainable.

Conversely, the Job Corps is not getting "readily trainable youth" but rather a high percentage who do not read above the third grade level. The Job Corps emphasis has necessarily shifted to very basic and remedial education to accommodate the needs of its enrollees, while at the same time maintaining a sophisticated vocational training program for that percentage of enrollees who are prepared for it.

In addition we also noticed that the most generally quoted cost of a Mohoning Valley student is $2,500 and that courses run from 3 to 12 months; the majority of the courses are scheduled for 25 weeks. It is known that the Departments of Labor and Health, Education and Welfare allocations to date have averaged $2,486 per enrollee. The latest budget request for the Mohoning Valley project would increase the costs to $3,394 per enrollee or about $6,700 on an *annualized* basis. These costs, of course, do not consider the significant contributions which we understand were made to the School by various state agencies and local industry in the form of cash, services and other resources.

Comparisons of the Mohoning Valley operating costs are difficult except in the most gross manner. On an annualized basis, the Federal Government's contribution alone could be $6,700. While the $6,700 is close to the present annual cost of a Job Corps enrollee, such a comparison is not valid. As you are aware, the Job Corps provides many services not provided by the School, such as extensive medical and dental treatment, clothing, allowances and allotments outside of subsistence costs. Nor do costs attributed to the School cover such items as the recruiting, screening, referral, and placement of enrollees. This service is provided by the Ohio State Employment Service without charge to the School; whereas Job Corps is directly charged for such services.

We know of no example whereby Mohoning Valley has taken dropouts from the Job Corps and provided them with successful training.

I hope this information will be of help to you. If you have any further questions, please get in touch with me.

With every best wish.

Sincerely,

SARGENT SHRIVER, *Director.*

STATE OF OHIO DEPARTMENT OF EDUCATION,
Columbus, June 8, 1967.

Hon. CHARLES E. GOODELL,
House of Representatives,
Washington, D.C.

DEAR MR. GOODELL: In my appearance before the subcommittee of the House, you indicated that you had a letter from Sargent Shriver raising some questions relative to the Mahoning Valley Residential Vocational Center. I agreed to provide you with information concerning the questions, but I did not receive a copy of the letter until May 17. Since that time, I have been on the road quite a bit and have not replied as promptly as the importance of your request demands.

In paragraph two, Mr. Shriver makes reference to the fact that both Mahoning Valley and the Job Corps face problems of dropouts. This is true, since we both are working with school disoriented youth who already have failed one or more times in life.

In paragraph three, Mr. Shriver indicates the "average" number of grades completed and the average reading level of the Mahoning enrollees. In the next paragraph, he states the Job Corps is getting a "rather high percentage" who do not read above the third grade level. It is interesting that he does not give percentages for the Job Corps as he does for Mahoning Valley. Mahoning Valley also has a "rather high percentage" of students stating that cannot spell "cat." Remedial reading and mathematics were two of the basic areas of instruction at Mahoning Valley from its inception. In addition to the remedial education effort, a programed instruction program was organized for those who did not need the remedial education, in order to enrich the educational program for all students. Mr. Albert Salerno, who provides leadership for this program, was given an award from the Department of Audio-Visual Education of the National Education Association for his work. A copy of the news release is enclosed.

In relationship to the relative ability and nature of the students accepted, the Ohio State Employment Service has indicated that Mahoning Valley has accepted students that were refused by the Job Corps.

In another paragraph of his letter, Mr. Shriver indicates that costs reported do not reflect contributions by various State agencies and local industry. There are no cash contributions from State agencies and the local agency serving as the agency for handling funds has not made an investment of funds in the educational or housing program, except for the initial investment made for capital outlay in the residential area. This cost could not be covered by manpower funds. A statement from this corporation is included.

The Vocational Rehabilitation Unit in our State does provide services to the unit at Mahoning Valley in the same manner as they would provide services to other persons in the State. We have been able to obtain the necessary health and psychological services from Vocational Rehabilitation sources. This to me is one of the strengths of our effort at Mahoning Valley. We use existing units of government and governmental services, rather than establish competing services. We make no separate payments to the State Employment Service for their cooperation and service; they provide services as a part of their obligations.

In the section of Mr. Shriver's letter dealing with costs, I again find two different methods used in comparing costs. He reports that our programs average 25 weeks in length and gives the figure of cost for this period. He then projects the cost to a full year for each trainee and compares such a total annual cost for a full year of training with a per enrollee cost within the Job Corps. He is correct that such comparisons are not valid because there is no indication that all enrollees in the Job Corps remain for a total year or any indication of what the cost is for maintenance of the students in a Job Corps program for a total year. In addition, comparisons should be made only on job training centers. Camps should not be included.

In the budget for the current year, the Office of Economic Opportunity called for funds for the Job Corps on the basis of enrollees, not completion or full year terms, which would have cost a minimum of $7,888 *per enrollee.* I have not checked this year's budget proposal.

Information from Mahoning Valley is indicated in several ways below so that a full understanding can be gained of costs. Our previous reported costs were given in the same manner as O.E.O. costs have been estimated. The costs were given to your subcommittee in previous testimony on a per enrollee basis. Included in the costs were capital outlay, investments for equipment, and remodeling. A review of the accounts for the reports given to your subcommittee indicate:

Average cost per enrollee without equipment and remodeling	*$2, 241. 00
Average cost per enrollee including equipment and remodeling	2, 607. 00
Average cost per graduate including equipment and remodeling	5, 027. 39
Average cost adjusting to a full 52-week year of instruction per trainee not including equipment and capital outlay	5, 637. 72
Average cost adjusting to a full 52-week year of instruction per trainee including equipment and capital outlay	6, 558. 03

*All figures include allowances; transportation, and subsistence.

It is our belief that not all disadvantaged youth need a full year of training in order to become employable and we do not, therefore, propose to keep all of them a full year.

We believe that residential centers provided under the proposed amendments to the Vocational Education Act of 1963 can make the Job Corps centers obsolete. There is a better way.

Less publicized but equally important, is the job training center that we have organized at Jackson, Ohio in the center of Appalachia to provide for training or retraining of unemployed adults as well as youth. This center accepts adults or out-of-school youth, with emphasis on adults, over the whole Appalachia area into a residential type program. The residential section of this program, however, involves the use of housing within the city in which the program is located. This center was established because there was no place in the Appalachia section of our State where we could provide a comprehensive retraining program for unemployed youth and adults. This program has been in operation for the same period as the Mahoning Valley program and is a continuing successful, effective, economical program. As far as I know, this is the only training center of its type that has been established under manpower, and I do not believe that O.E.O. has an adult center of this type in operation. We would welcome your committee's investigation of both the Mahoning Valley Vocational School for disadvantaged youth and the Jackson Vocational Center for unemployed youth and adults from Appalachia.

I appreciate sincerely the courtesy extended me during my appearance before the Subcommittee on Education. I was very impressed with the questions from your committee. Education must be kept a State and local responsibility. Financial assistance through the Vocational Education Act of 1963, vigorous leadership from the U.S. Office of Education, and the coordination of the efforts of existing agencies within the State and local communities can provide the services needed, including services to disadvantaged youth and adults, safeguard our American Heritage through State and local control of education, and do the job effectively and economically.

Cordially,

BYRL R. SHOEMAKER,
Director, Vocational Education.

NEWS RELEASE FROM THE NATIONAL EDUCATION ASSOCIATION, APRIL 25, 1967

ATLANTIC CITY, N.J.—Albert A. Salerno, of 848 Bowman Street, Vienna, Ohio, received an award of $500 from the Department of Audiovisual Instruction of the National Education Association. The award was made during the DAVI convention held here April 2–6.

The award is given to classroom teachers who are doing outstanding work in programmed instruction. The funds for these awards are contributed by the Behaviorial Research Laboratories of Palo Alto, California.

Salerno, director of Programmed Learning Center, Mahoning Valley Vocational School, has been experimenting with vocational training of high school drop-outs.

The scholarship was given during the second general session of the DAVI convention. More than 5000 educators, researchers, and leaders in the field of instructional technology attended the convention which featured over 430 display booths. It was the largest exhibit of instructional materials and equipment held by any one organization in professional education in the world.

Trouble Ahead for Job Corps Program

[From the Niles Times, Apr. 22, 1967]

Washington.—The highly costly and turbulence-racked Job Corps program is in deep trouble in Congress.

Its fate is very uncertain. There are strong backstage indications that this anti-poverty plan to train school dropouts, which has cost some $685 million in the three years it has been in operation and has produced at most no more than 15,000 so-called "graduates," will be either drastically changed or eliminated entirely.

In the forthcoming House Education and Labor Committee hearings on President Johnson's new $2.06 billion anti-poverty budget, this widely controversial program will be the principal focus of attention. Every aspect will be subjected to bare-knuckled going-over.

Significantly, this caustically critical scrutiny will be bipartisan.

Democrats as well as Republicans are irate over the constant scandals, excesive costs, mismanagement, waste, bungling and meager results that have characterized the Job Corps centers.

Graphically illustrative of this exasperation is the sharp disapproval of Representative Edith Green, Ore., second-ranking Democrat on the committee. Mrs. Green sponsored the legislation that established the women's Job Corps centers, but she now views the whole program with blunt misgivings.

"Last year members of the Administration admitted that the average cost per enrollee of the boys' Job Corps was $9,100 per year for just operating expenses, with no capital outlay included," said Mrs. Green. "The average cost for girls was $8,400 per girl, with no capital outlay included. In one Job Corps center, operating cost per year per enrollee was $13,000.

"Outside of the outrageous costs for the Job Corps program, the additional tragedy is we are reaching so very few who need help. Statistics show there are about five million dropouts. I have used the figure of 500,000 girls who are eligible for the girls' Job Corps and 500,000 boys for the boys' Job Corps, both by age and by economic circumstances.

"Just one year ago when we were considering this budget, there were only 1,600 girls and some 18,000 boys in the program. That is an infinitesimal number compared with the problem that faces us if we are really serious about doing something for these youngsters who need help."

What's Wrong.—A long list of complaints and grievances faces anti-poverty director Sargent Shriver and his lieutenants when they testify before the Education and Labor Committee in behalf of the $2.06 billion budget they are seeking.

Actually, this is only two-thirds of what Shriver wanted. He proposed a $3.5 billion budget. But the President turned him down, pointing out that last year he sent Congress a $1.75 billion budget which was pared to $1.612 billion. The President expressed willingness to hike his 1966 figure by $300 million, even though privately doubting it would win congressional approval.

On that he is absolutely correct. It's questionable whether Congress will vote even as much as it did last year.

An impelling reason is the vigorous bipartisan disapproval of the costly Job Corps program due to its numerous failings and inadequacies. These will be aired in bruising detail in the hearings. Foremost among them are:

—Cost of renovating camps and other installations for Job Corps centers has greatly exceeded estimates. Illustrative is Camp Atterbury, Ind., which had been estimated to cost $500,000 to put in shape for a Job Corps, but the actual outlay was $3 million. Another instance was the $300,000 estimate to establish a women's Job Corps in Huntington, W.Va. The actual expenditure was more than double—over $600,000.

—Most contracts to operate the centers were revised considerably upwards within weeks after they opened. These added costs run into millions of dollars.

—Despite the high cost of the centers and the constant ballyhoo to publicize them, considerable difficulty is being encountered in obtaining enrollees. In recent months, "bonuses" of $15 to $25 have been paid for recruits in a nationwide drive to fill empty billets.

—Wholesale turnovers in operating personnel have occurred in all the camps. Virtually every director and other administrators have been replaced one or several times. There have also been numerous changes in the colleges and companies that run the camps.

—Until recently, the Office of Economic Opportunity, which administers the anti-poverty program, made no attempt to keep records on what happened to enrollees: how many dropped out, the number of "graduates" and what they subsequently did. Finally, in a belated effort to fill this vacuum, OEO hired a national polling organization. OEO also established a Job Corps evaluation unit to ascertain to what extent the centers are training jobless youths and placing them in jobs for which they presumably are trained.

A More Realistic Plan.—The reinforced Republicans on the Education and Labor Committee (14 to 18 Democrats) have a substitute for the Job Corps program that would cost a lot less and provide meaningful training in private industry.

Cost of the GOP plan is put at $230 million as against $295 million proposed for the Job Corps. Under their program, the Republicans 43,250 youths would be trained as against 38,000 in the Job Corps centers—if the latter operated at capacity, which they aren't.

Led by Representatives Albert Quie, Minn., and Charles Goodell, N.Y., sponsors of the alternative plan, the Republicans will make a determined effort to enact it.

They have a good chance of succeeding with the support of Democrats fed up with the incessant turmoil over the Job Corps centers.

MAHONING VALLEY VOCATIONAL SCHOOL, INC.,
April 25, 1968.

TO WHOM IT MAY CONCERN:

The Mahoning Valley Vocational School Incorporated (a non-profit educational corporation) was chartered for the purpose of administering those federal funds needed to operate the housing phase of the Mahoning Valley Vocational School Project. A $250,000.00 grant was made to the corporation by the Leon Beegley Foundation to serve as a revolving fund for the housing phase; the $250,000.00 is still intact. Therefore, the only funds actually used in the total project are those funds approved and appropriated under the Manpower Development and Training Act.

The Mahoning Valley Vocational School Inc. assumed sponsorship of the training phase of the program in July, 1964 after a determination was made that the Niles Board of Education could not legally sponsor a project involving students from districts other than its own. The sole function of the Corporation has been that of a holding agency. The program has been administered by Vocational Educators under the direction of the Division of Vocational Education, State Department of Education, Columbus, Ohio.

Permissive legislation has been enacted making it legal for a local Board of Education to sponsor such a project. Definite plans are now being made to transfer sponsorship of the Mahoning Valley Vocational School back to a local Board of Education.

KENNETH M. LLOYD, *President.*
ROBERT SMALL, *Acting Director.*

MAHONING VALLEY VOCATIONAL SCHOOL, COST PER GRADUATE, AUGUST 1, 1964–JUNE 3, 1966

Total cost	$4, 997, 222. 00
Number of graduates	994
Average cost per graduate	$5, 027. 39

Office of Economic Opportunity,
Executive Office of the President,
Washington, D.C., March 9, 1967.

Hon. Charles E. Goodell,
House of Representatives,
Washington, D.C.

Dear Congressman Goodell: During our recent visit with you, we discussed the cost of running Job Corps centers and, if you recall, during our joint appearance before the American Society for Public Administration last fall, you cited the Mahoning Valley Vocational School in Ohio as an example of a similar program which was run more efficiently and economically.

The evaluation of the relative efficiency and effectiveness of various anti-poverty programs is one of the more difficult tasks that we in OEO have undertaken. We have found that the Mahoning Valley Vocational School had to overcome a "dropout" problem similar in magnitude to the problem experienced by Job Corps. However, we found many characteristics which would preclude one from making reasonable comparisons of the effectiveness and efficiency of the two anti-poverty programs.

For example, the enrollees differ. The Mahoning Valley enrollees have completed on the average of 8.4 grades of school and have attained an average reading level of 6 to 7 grades. These enrollees, while unemployed, are considered by Ohio educational officials to be readily trainable.

Conversely, the Job Corps is not getting "readily trainable youth," but rather a high percentage who do not read above the third grade level. The Job Corps emphasis has necessarily shifted to very basic and remedial education to accommodate the needs of its enrolles, while at the same time maintaining a sophisticated vocational training program for that percentage of enrollees who are prepared for it.

In addition we also noticed that the most generally quoted cost of a Mahoning Valley student is $2,500 and that courses run from 3 to 12 months; the majority of the courses are scheduled for 25 weeks. It is known that the Departments of Labor and Health, Education, and Welfare allocation to date have averaged $2,486 per enrollee. The latest budget request for the Mahoning Valley project would increase the costs to $3,394 per enrollee or about $6,700 on an annualized basis. These costs, of course, do not consider the significant contributions which we understand were made to the School by various state agencies and local industry in the form of cash, services and other resources.

Comparisons of the Mahoning Valley operating costs are difficult except in the most gross manner. On an annualized basis, the Federal Government's contribution alone could be $6,700. While the $6,700 is close to the present annual cost of a Job Corps enrollee, such a comparison is not valid. As you are aware, the Job Corps provides many services not provided by the School, such as extensive medical and dental treatment, clothing, allowances and allotments outside of subsistence costs. Nor do costs attributed to the School cover such items as the recruiting, screening referral, and placement of enrollees. This service is provided by the Ohio State Employment Service without charge to the School; whereas Job Corps is directly charged for such services.

It was nice visiting with you. I hope that in the coming year we can work together constructively for the good of the program.

Sincerely,

Sargent Shriver,
Director.

MAHONING VALLEY VOCATIONAL SCHOOL, STUDENT-YEAR COST, AUG. 1, 1964 TO JUNE 3, 1966

Project[1]	Student years[2]		Total cost of project	52-week cost per student-year	48-week cost per student-year[4]	52-week cost per student-year (operating)[5]	48-week cost per student-year (operating)[5]
	1952	1948					
286 (1-19)	350		$2,129.318	$6,083.76		$4,850.51	
		378	(1,697,680)		$5,683.11		$4,491.21
5111 (1-4)	30½		193,483	6,343.72		6,244.03	
		33	(190,445)		5,863.12		5,771.06
5166	10½		70,612	6,724.96		6,424.96	
		11	(67,462)		6,419.27		6,132.90
5186 (1-16)	327		2,332,804	7,133.95		6,435.23	
		342	(2,104,322)		6,821.06		6,152.98
6128 (1-4)	44		271,005	6,159.20		5,364.56	
		47½	(236,041)		5,705.33		4,969.24
Total	762		[6] 4,997,222	[6] 6,558.03		[6] 5,637.72	
		811½	(4,295,950)		[6] 6,158.05		[6] 5,293.38

[1] Training project approved under the Manpower Development and Training Act.

[2] Student-years compiled by dividing total student-weeks by 52 and 48.

[3] Total maximum cost of each project as approved; those funds not used are deobligated and returned to State or National pool.

[4] Cost per student-year determined by dividing approved amount by student-years.

[5] Cost per student-year determined by dividing approved amount minus costs other than normal operating costs (i.e., equipment, remodeling).

The Mahoning Valley Vocational School project is a pilot experimental program; due to experimentation, costs are higher than the normal Manpower Development and Training project. Numerous techniques, methods and materials are now incorporated in other Manpower projects as a result of M.V.V.S. experimentation.

BREAKDOWN OF TRAINING COSTS OF MVVS AUG. 1, 1964 TO JUNE 3, 1966

Program	Trainees approved	Trainees actually enrolled	Trainees graduated	Approved [1] educational training cost	Average [2] per pupil	Approved [1] training allowance, transportation, and subsistence	Average [2] cost per pupil	Approved educational [1] training costs (minus equipment and remodeling) plus allowance, transportation, and subsistence	Average [2] cost per pupil	Approved [1] total	Average [2] cost per pupil
2											
586-(1-19)	640	859	442	$899,912	$1,048	$1,188,603	$1,384	$1,697,680	$1,976	$2,129,318	$2,479
5111-(1-4)	95	90	53	58,091	645	135,392	1,504	190,445	2,116	193,483	2,150
5166	25	28	11	22,182	792	48,430	1,730	67,462	2,409	70,612	2,522
186-(1-16)	805	833	433	953,292	1,144	1,379,512	1,656	2,104,322	2,526	2,332,804	2,800
6128-(1-4)	95	107	55	94,379	882	176,626	1,651	236,041	2,206	271,005	2,533
Total	1,660	1,917	994	2,027,856	1,058	2,928,563	1,528	[3] 4,295,950	2,241	4,997,222	2,607

[1] Costs indicated are approved amounts and not necessarily amounts expended.
Average costs are based on figures in col. 3 which reflect trainees actually enrolled.

[3] The operational costs include $200,000 which was paid to the U.S Air Force for services provided[3]

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C. May 18, 1967.

Hon. ROMAN PUCINSKI,
Chairman, Subcommittee on General Education, House Committee on Education and Labor, Rayburn Office Building, Washington, D.C.

DEAR MR. PUCINSKI: Undoubtedly you are aware that Congressman Younger was striken with leukemia in April and has not been able as yet to return to a full work schedule in the office. Because of this, I am taking the liberty of writing to you.

We are receiving in this office a great number of letters from members of unified school districts in Mr. Younger's Congressional District in which concern is expressed over the deletion of funds in the 1967–68 budget for the Work Study Program authorized under Public Law 88–210.

It is my understanding that hearings are being held currently on the Educational Improvement Act of 1967 and the question of the continuation of the Work Study Program is being considered in these hearings. I am enclosing several of the letters received. These are representative of the many letters we are getting from constituents of Mr. Younger who are interested and concerned with this program and I ask on behalf of Mr. Younger that they be made a part of the record of the hearings being held on the Educational Improvement Act.

Respectfully yours,

(Mrs.) IRENE A. PHILLIPS, *Secretary.*

RAVENSWOOD HIGH SCHOOL,
East Palo Alto, Calif., May 11, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR HONORABLE YOUNGER: As teachers for the *Sequoia Union High School District* in Redwood City, California, we are writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P.L. 88–210.

The Work Study Program filled a very real need for students who do not quite meet the stringent financial need set up by the Neighborhood Youth Corps under the Economic Opportunities Act, but nevertheless need a financial boost to be able to continue their vocational education in high school and/or go on to further vocational training. In addition, Work Study enabled the participants to get real vocational work experience, and for most of them this was the only work experience they will have had when they graduate from high school to take their place in our competitive economic system.

As educators, we would also like to urge that you support the House of Representatives bills which have to do with extending the authorization of Vocational Education Act of which Work Experience Education is a part. These are Mr. Hawkins' bill HR 8527 and Mr. Pucinski's bill HR 7380.

We respectfully submit that these matters deserve your serious consideration and attention.

Very truly yours,

(Mrs.) GRACE TURNER,
RAYMOND HERINGER
(Coordinators of Work Experience).

SOUTH SAN FRANCISCO HIGH SCHOOL,
SOUTH SAN FRANCISCO UNIFIED SCHOOL DISTRICT,
South San Francisco, Calif., May 8, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As the Work-Study coordinator for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P.L. 88–210.

The attached report will bring to your attention the fact that we are aware that additional funds were made available to NYC to "cover" this Work-Study program. However, only a small percentage of our students can meet the stringent financial need requirements of NYC, yet all of them have a real financial need which was allievated in part by the $45 per month they were able to earn under Work Study. In addition, Work Study enabled them to get real vocational work experience, and for many of them this is the only work experience they will have had when they graduate from high school to take their place in our competitive economic system. College bound students have many opportunities for scholarships, student loans, etc., the very poor are given numerous opportunities for aid, but the vocational student has nowhere to turn for the financial support needed to get him through business school or to the technical courses that he will need to get ahead in his chosen vocation. Furthermore, under the "Poverty Act", much of the allotted funds is used up in administrative costs. Under Work-Study, all of the allotted money went directly to the students. Not one person in any school district that I know of received extra compensation for the long hours of work involved in supervising and coordinating these youngsters.

I respectfully submit that this matter deserves your serious consideration and attention.

As Distributive Education Coordinator for our district, I would also like to urge that you support the House of Representatives bills which have to do with extending the authorization of the Vocational Education Act of which Work Experience Education is a part. I believe these are Mr. Hawkins' bill HR8527 and Mr. Pucinski's bill HR7380.

Thank you for giving this your prompt attention.

Very truly yours,

MARTHA L. SCHIFFERLI,
Distributive Education Coordinator.

MARCH 2, 1967.

Memorandum to: Dr. P. Nielsen, Dr. C. Boyack, Mr. J. Smith, Mr. F. Hunter, Mr. R. Keropian, Mr. L. Bagnall, Mr. G. Hurley, Mr. M. Tyler, and Mr. D. Albro.

From: Martha L. Schifferli, Work Study Coordinator.

Subject: VEA Work Study Program Progress Report as of January 15, 1967.

The following is a summary of some of the statistical information tabulated on the students employed under the Work Study Program from September 12th through January 15, 1967:

School	Students working		Need qualification (family income)—			
	Male	Female	to $3,000	$3,000 to $5,000	$5,000 to $8,000	$8,000 plus
El Camino	8	30	8	23	36	19
South San Francisco-Baden	15	33				

Of these students, seven live in foster homes; twenty-three in homes where there is only one natural parent (caused either by divorce, separation, or the death of the other parent) and five are virtually self-supporting.

Fifty-six of this total are from families with five to twelve children living at home, with the breakdown as follows:

5 children	18
6 children	14
7 children	9
8 children	5
9 children	5
10 children	3
12 children	2

Fifteen families reported unusual financial circumstances such as permanent disability, prolonged illness or unemployment (especially in the building trades), or exceptionally heavy medical or dental bills.

Vocational plans for the 86 students involved include sixty-five preparing for office occupations or work in distribution, and twenty-one for trade or technical occupations.

This figure of "86" students represents the total number of youngsters who have been interviewed, processed, and placed in a work station to date. However, not all of these students have been working at any one time. The following figures show the breakdown of the Work Study payroll by month, by school:

Month	El Camino	SSFHS	Baden	Total
October	29	32		61
November	29	38		67
December	28	38	1	67
January	26	37		65

JOB STATION ASSIGNMENTS

	SSFHS/Baden	El Camino	District office	
			Section	Number
General office	2	2	Business office	1
Attendance office		4	Accounting office	1
Counseling office	1	1	Cafeteria	1
Department offices	7	8	Library	2
Service center	3	3	Purchasing	1
Shops	5	1	Maintenance	2
Physical education department	1	2	Floating	1
Cafeteria	2	1		
Student store	1			
Library	2	4		
Junior high teacher aides	3	3		
Elementary school teacher aides	2			

Total payroll hours for the month ending December 15 were 1789 average—26.7 hours per person. Total payroll hours for the month ending January 15 were 1031 average—15·9 hours per person.

Average monthly payroll from September 15, 1966 through January 15, 1967 was $2016.50.

With the advent of the Neighborhood Youth Corps in the district, a total of eight youngsters—two from SSFHS, four from El Camino, and two from Baden—were transferred from Work Study to NYC. All met the stringent Federal financial need requirements and were transferred to enable them to work the 60 hours per month under NYC rather than the 34 hours to which they are limited under Work Study.

Although we have received no official notification, semi-official rumors are strong that the Work Study program will be discontinued at the high school level after July 1, 1967. One possibility is that NYC funds will be somewhat increased, but as the above figures indicate, while all of the vocational students enrolled in our Work Study program have a real financial need to enable them to remain in school or to carry on with their vocationally planned futures, many of them would not be eligible for the "Poverty Act" NYC funds. We feel the discontinuance of this program will be a great loss to our young students.

SOUTH SAN FRANCISCO UNIFIED SCHOOL DISTRICT,
South San Francisco, Calif., May 10, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As Personnel Director for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P.L. 88–210.

The Work Study Program filled a very real need for students who do not quite meet the stringent financial need set up by the Neighborhood Youth Corps under the Economic Opportunities Act, but nevertheless need a financial boost to be able to continue their vocational education in high school and/or go on to further vocational training. In addition, Work Study enabled the participants to get real vocational work experience, and for most of them this was the only work experience they will have had when they graduate from high school to take their place in our competitive economic system. The services performed by these people are a valuable asset to the business of operating a school district.

I would also like to urge that you support the House of Representatives bills which have to do with extending the authorization of the Vocational Education Act of which Work Experience Education is a part. These are Mr. Hawkins' bill HR 8527 and Mr. Pucinski's bill HR 7380.

I respectfully submit that these matters deserve your serious consideration and attention.

Very truly yours,

THEODORE W. LEONARD,
Director, Classified Personnel.

SOUTH SAN FRANCISCO SENIOR HIGH SCHOOL,
SOUTH SAN FRANCISCO UNIFIED SCHOOL DISTRICT,
South San Francisco, Calif., May 10, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As a counselor, for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P.L. 88–210.

The Work Study Program filled a very real need for students who do not quite meet the stringent financial need set up by the Neighborhood Youth Corps under the Economic Opportunities Act, but nevertheless need a financial boost to be able to continue their vocational education in high school and/or go on to further vocational training. In addition, Work Study enabled the participants to get real vocational work experience, and for most of them this was the only work experience they will have had when they graduate from high school to take their place in our competitive economic system.

As an educator, I would also like to urge that you support the House of Representatives bills which have to do with extending the authorization of the Vocational Education Act of which Work Experience is a part. These are Mr. Hawkins' bill H.R. 8527 and Mr. Pucinski's bill H.R. 7380.

I respectfully submit that these matters deserve your serious consideration and attention.

Very truly yours,

(Mrs.) HELEN C. BROWN, *Counselor.*

SOUTH SAN FRANCISCO SENIOR HIGH SCHOOL,
SOUTH SAN FRANCISCO UNIFIED SCHOOL DISTRICT,
South San Francisco, Calif., May 10, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As a teacher and counselor for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P.L. 88–210.

The Work Study Program filled a very real need for students who do not quite meet the stringent financial need set up by the Neighborhood Youth Corps under the Economic Opportunities Act, but, nevertheless, need a financial boost to be able to continue their vocational education in high school and/or go on to further vocational training. In addition, Work Study enabled the participants to get real vocational work experience, and, for most of them, this was the only work experience they will have had when they graduate from high school to take their place in our competitive economic system.

As an educator, I would also like to urge that you support the House of Representatives bills which have to do with extending the authorization of the Vocational Education Act of which Work Experience is a part. These are Mr. Hawkins' bill HR8527 and Mr. Pucinski's bill HR 7380.

I respectfully submit that these matters deserve your serious consideration and attention.

Very truly yours,

ROBERT WARFIELD, *Counselor.*

SOUTH SAN FRANCISCO SENIOR HIGH SCHOOL,
SOUTH SAN FRANCISCO UNIFIED SCHOOL DISTRICT,
South San Francisco, Calif., May 11, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As a Vice Principal for Girls for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P. L. 88–210.

The Work Study Program filled a very real need for students who do not quite meet the stringent financial need set up by the Neighborhood Youth Corps under the Economic Opportunities Act, but nevertheless need a financial boost to be able to continue their vocational education in high school and/or go on to further vocational training. In addition, Work Study enabled the participants to get real vocational work experience, and for most of them this was the only work experience they will have had when they graduate from high school to take their place in our competitive economic system.

As an educator, I would also like to urge that you support the House of Representatives bills which have to do with extending the authorization of the Vocational Education Act of which Work Experience Education is a part. There are Mr. Hawkins' bill HR 8527 and Mr. Pucinski's bill HR 7380.

I respectfully submit that these matters deserve your serious consideration and attention.

Very truly yours,

CATHERINE H. KELLY,
Vice Principal for Girls.

SOUTH SAN FRANCISCO SENIOR HIGH SCHOOL,
SOUTH SAN FRANCISCO UNIFIED SCHOOL DISTRICT,
South San Francisco, Calif., May 11, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As a counselor, for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68, to the jurisdiction of P.L. 88–210.

The Work Study Program filled a very real need for students who do not quite meet the stringent financial need set up by the Neighborhood Youth Corps under the Economic Opportunities Act, but nevertheless need a financial boost to be able to continue their vocational education in high school and/or go on to further vocational training. In addition, Work Study enabled the participants to get real vocational work experience, and for most of them this was the only work experience they will have had when they graduate from high school to take their place in our competition economic system.

As an educator, I would also like to urge that you support the House of Representatives bills which have to do with extending the authorization of the Vocational Education Act of which Work Experience Education is a part. These are Mr. Hawkins' bill HR 8527 and Mr. Pucinski's bill HR 7380.

I respectfully submit that these matters deserve your serious consideration and attention.

Very truly yours,

MRS. VIRGINIA HERING, *Counselor.*

MAY 11, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As a teacher for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P.L. 88–210.

The Work Study Program filled a very real need for students who do not quite meet the stringent financial need set up by the Neighborhood Youth Corps under the Economic Opportunities Act, but nevertheless need a financial boost to be able to continue their vocational education in high school and/or go on to further vocational training. In addition, Work Study enabled the participants to get real vocational work experience, and for most of them this was the only work experience they will have had when they graduate from high school to take their place in our competitive economic system.

As an educator, I would also like to urge that you support the House of Representatives bills which have to do with extending the authorization of the Vocational Education Act of which Work Experience Education is a part. These are Mr. Hawkins' bill HR8527 and Mr. Pucinski's bill HR7380.

I respectfully submit that these matters deserve your serious consideration and attention.

Very truly yours,

KENNETH M. FARMER,
Business Department.

MAY 11, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As a teacher, for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P.L. 88–210.

The Work Study Program filled a very real need for students who do not quite meet the stringent financial need set up by the Neighborhood Youth Corps under the Economic Opportunities Act, but nevertheless need a financial boost to be able to continue their vocational education in high school and/or go on to further vocational training. In addition, Work Study enabled the participants to get real vocational work experience, and for most of them this was the only work experience they will have had when they graduate from high school to take their place in our competitive economic system.

As an educator, I would also like to urge that you support the House of Representatives bill which have to do with extending the authorization of the Vocational Education Act of which Work Experience Education is a part. These are Mr. Hawkins' bill HR8527 and Mr. Pucinski's bill HR7380.

I respectfully submit that these matters deserve your serious consideration and attention.

Very truly yours,

MARLENE V. CORDER,
English Department.

MAY 11, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As a teacher for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P.L. 88–210.

The Work Study Program filled a very real need for students who do not quite meet the stringent financial need set up by the Neighborhood Youth Corps under the Economic Opportunities Act, but nevertheless need a financial boost to be able to continue their vocational education in high school and/or go on to further vocational training. In addition, Work Study enabled the participants to get real vocational work experience, and for most of them this was the only work experience they will have had when they graduate from high school to take their place in our competitive economic system.

As an educator, I would also like to urge that you support the House of Representatives bills which have to do with extending the authorization of the Vocational Education Act of which Work Experience Education is a part. These are Mr. Hawkins' bill HR8527 and Mr. Pucinski's bill HR7380.

I respectfully submit that these matters deserve your serious consideration and attention.

Very truly yours,

HELEN HAIM,
Foreign Language Department.

MAY 11, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As a teacher for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P.L. 88–210.

The Work Study Program filled a very real need for students who do not quite meet the stringent financial need set up by the Neighborhood Youth Corps under the Economic Opportunities Act, but nevertheless need a financial boost to be able to continue their vocational education in high school and/or go on to further vocational training. In addition, Work Study enabled the participants to get real vocational work experience, and for most of them this was the only work experience they will have had when they graduate from high school to take their place in our competitive economic system.

As an educator, I would also like to urge that you support the House of Representatives bills which have to do with extending the authorization of the Vocational Education Act of which Work Experience Education is a part. These are Mr. Hawkins' bill HR8527 and Mr. Pucinski's bill HR7380.

I respectfully submit that these matters deserve your serious consideration and attention.

Sincerely yours,

HOWARD A. FRYE,
Social Science Department.

MAY 11, 1967.

Hon. J. ARTHUR YOUNGER,
House of Representatives,
Washington, D.C.

DEAR SIR: As a department head for the South San Francisco Unified School District in South San Francisco, I am writing to urge that you do whatever is in your power to restore the Work Study funds, which were completely deleted from the 1967–68 budget, to the jurisdiction of P.L. 88–210.

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Very sincerely yours,

GLENN T. BUGOLICH,
Chairman, Science Department.

MAY 11, 1967.

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House of Representatives,
Washington, D.C.

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I respectfully submit that these matters deserve your serious consideration and attention.

Sincerely yours,

MRS. MARIE HUIHUI,
Social Science Department.

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D.C., April 21, 1967.

Hon. ROMAN PUCINSKI,
Chairman, General Education Subcommittee of the Education and Labor Committee, Longworth House Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: Enclosed herewith is a copy of a letter I have received from Mr. R. O. Brinkman, a resident of my Congressional district, as well as case reports relative to technical education programs of the Springfield and Clark County Joint Vocational School.

I thought you might be interested in this information in view of the recent hearings on this legislation.

Sincerely yours,

CLARENCE J. BROWN, Jr., M.C.
Seventh Ohio District.

SPRINGFIELD AND CLARK COUNTY
JOINT VOCATIONAL BOARD OF EDUCATION,
Springfield, Ohio, March 9, 1967.

Hon. CLARENCE J. BROWN, Jr.,
16 South Fountain Avenue, Springfield, Ohio

DEAR MR. BROWN: Earlier I wrote to you relative to the needs of federal action in vocational and technical education. Your response and expressed concern over vocational education was most welcome and was heartening to both my boards as well as myself. Thank you.

Sometimes the comprehensive view of programs, facilities, and mass operations precludes our attention to the individual student. We talk in numbers instead of people. Already we have maximum enrollment assured in the new Springfield and Clark County Joint Vocational School when it opens in September of 1967. We anticipate the same student enrollment in the Clark County Technical Institute when it initiates operations in new facilities in the fall of 1968.

Although we have no vocational graduates, we do have graduates of our technical education program that reflect what has been done with individual people. I have enclosed some case reports which I believe are self-evident.

While we have been able to serve some—basically with a combination of federal and state support—the legislation I suggested earlier would magnify the potential to a point where we could serve many more. Your known interest in working toward that end is appreciated.

Sincerely,

R. O. BRINKMAN,
Superintendent.

The Springfield and Clark County Technical Education Program

AGRI-BUSINESS

Joseph L. Mack, age 27, married, 3 children, no particular training, a series of jobs that were leading nowhere. Some of those jobs had been in farming or farm related positions in or near his home town of Spencerville, Ohio. Joe did enjoy working with farm people.

Almost by accident Joe Mack learned of a pilot program in Agri-Business to be offered by the Springfield and Clark County Technical Education Program. He applied for admission, was accepted, and promptly moved his family to Springfield where his wife found work as a registered nurse.

After two years of diligent work Joe's family watched him graduate in the top ten of the class 1965.

Today Joe Mack is working with farm people, and he has the security that he sought for his family. He is working in sales and the management of a farm service center in Spencerville . . . where else?

AGRI-EQUIPMENT

Leonard Phillips graduated from a small Ohio high school in 1960. He tried various kinds of work, liked some kinds better than others but was not satisfied with any position which he could do with his limited high school training. Leonard was interested in farm machinery and also liked working with people.

Mr. Phillips enrolled in the Agri-Equipment program of the Springfield and Clark County Technical Education Program. During his last semester he worked part-time as a partsman for the SAF Implement Company in Springfield. He continued working in that capacity for about 6 months after graduation.

Recently Leonard accepted a position with Shick's Inc. He has the responsibility of developing and then operating the parts department of their new branch in Lima, Ohio. Many such challenging positions exist for the young man or woman who is trained to take advantage of such opportunities.

BUSINESS DATA PROCESSING

Janet Steen graduated from high school with a college preparation background. She had planned to study bio-chemistry on the college level but was unable to finance that type of education. She chose the Springfield and Clark County Technical Education Program because it was located near her home and because the instructional fees were within her budget.

Janet graduated from the technical program in June 1964 with a major in Business Data Processing. During her second year as a student she worked part-time in a small unit record department of the Lawson Milk Company. After graduation Janet was hired by the City Board of Education to work as a computer programmer and computer operator. The following year her former employer hired her back as the manager of the unit record department. During the past year she became a full-time programmer for Duriron in Dayton, Ohio.

Janet is but one of many successful men and women who have completed this program which is designed to train persons to become computer programmers or systems analysts.

ELECTRICAL ENGINEERING

Allen North chose Technical Education because it was located near his home and the money he could earn by working part-time in a related field would help to pay his educational expenses. Allen's interest in electrical engineering was so great that he wanted to start immediately to learn those fundamentals rather than the usual courses pursued by college freshman.

Allen completed the electrical engineering program with a cumulative average of 3.9 in June 1965. While he attended the Technical Program he worked part-time as a technician for Robbins & Myers of Springfield. After graduation he completed his armed service commitment and then returned to Robbins & Myers on the engineering level. He currently is designing electric motors, with the aid of a computer, to fit customer requirement.

Other graduates have also indicated that the course computer applications in engineering, which is included in all of our engineering programs, has been beneficial to them. This type of training that is both dynamic and viable has enabled our graduates to enter the engineering fields at all levels depending upon their experience and ability. Salaries range from $5000 for some recent graduates to $11,000 for those who graduated earlier.

MECHANICAL ENGINEERING

Jack Worley was 25 years old, married, and had 2 children. He was working as a draftsman for Bauer Brothers. Without additional training an advancement seemed limited if not improbable.

Jack's high school record was average but he was accepted in the mechanical engineering program of the Springfield and Clark County Technical Education Program. He and his family prepared themselves for the long two years of his working 40 hours per week to support them, attending classes 25 hours per week, and doing the required studying whenever and wherever he could.

By his second year, Jack had changed positions and was working as a designer for a local engineering firm. He was carrying a 3.6 scholastic average. By May of that year he was faced with the major decision of accepting one of several excellent job offers. He chose General Electric of Cincinnati where he is successfully working in engineering design.

Through technical education on the community college level persons such as Jack Worley upgrade their training and then contribute their skills toward technological improvements and innovations demanded by our present national economy.

NEW YORK STATE HOME ECONOMICS TEACHERS ASSOCIATION,
June [illegible], 1967.

Hon. ROMAN PUCINSKI,
Chairman, Subcommittee on General Education, House Committee on Education and Labor, U.S. House of Representatives, Longworth Building, Washington, D.C.

DEAR CONGRESSMAN PUCINSKI: Home Economics Educators in New York State are most anxious to support your interest relative to the amendment to *broaden P.L. 88–210, The Vocational Education Act of 1963*, to include liberalized use of funds for the Homemaking aspect (Useful Employment) as well as the Occupational (Gainful Employment) aspect of Home Economics. It is very important that vocational education funds be available to continue and expand the scope of influence of Homemaking Education.

Homemaking Education serves both as a foundation for and supplement to essential occupational training. This aspect of the program serves all youth and adults, whether their vocational goals are immediate or long-range.

The Vocational Education Act of 1963 has provided strong support for developing and implementing the Home Economics Occupational Education programs to provide occupational training opportunity in this State for both youth and adults.

However, limited availability of funds for use relative to the useful employment aspect (Homemaking Education), greatly restricts the extent and level of services which can be provided to continue and expand this significant aspect of the program.

It is extremely important to avoid separation of the Occupational Education and Homemaking Education aspects of the Home Economics program, especially when the foundational and supportive nature of Homemaking Education strengthens significantly the effectiveness of occupational training for students who train in any field of vocational pursuit.

Therefore, in New York State, as in other states, funds are needed to strengthen and enrich the Homemaking Education program in many ways, including to:

- Develop inservice education programs for Home Economics teachers and supervisors to enable to keep abreast of rapid developments in the field and in educational trends and techniques.
- Strengthen and expand preservice Home Economics Teacher Education programs, including supervised teaching, field and work experience.
- Expand co-curricular opportunities for in-school youth through the Future Homemakers of America program.
- Design research and development projects to explore new ways of improving instruction, and utilization of staff and facilities.
- Implement leadership development programs to identify and prepare individuals for administration and supervisory roles in this field.

We appreciate your continued interest in this concern, and urge your constructive action relative to the amendment to liberalize the use of P.L. 88-210 funds for Homemaking Education.

Sincerely yours,

ETHELWYN CORNELIUS,
President, NYSHETA.

HOME ECONOMICS EDUCATION IN NEW YORK STATE

The development of each individual to his fullest potential, the constructive application of his talents, competence to define and perform his role within the structure of the universe, are major objectives of society as a whole, of education, and of Home Economics Education in particular.

The primary goal of Home Economics Education is to help individuals develop those attitudes, appreciations, understandings, abilities and basic values which enable individuals to become well-adjusted, contributing members of the family, the community and society.

To implement this goal in New York State, the Statewide program of Home Economics Education now embraces two program aspects, with concern for contributing to the total education and training of all individuals—children, youth, and adults—who represent the span of abilities, backgrounds, and socio-economic levels comprising the population of today. The two program aspects are:

Home Economics Program Aspect 1: Home Economics Homemaking and Family Living Education—a general education program of instruction and guided activity for persons of all ages to promote the development of personal attitudes and values which contribute to the whole of living.

Home Economics Program Aspect 2: Home Economics Occupational Education—a specialized program of education and training to aid in the development of attitudes and job competencies, salable on the job market, which lead individuals to find satisfying remunerative employment in entry-level occupations utilizing the knowledge and skills of the field of home economics.

The two program aspects draw instructional content from the basic body of knowledge identified for the field of home economics: Child Development; Economics of the Family; Family and Community Health; Housing, Equipment and Furnishings; Management of Individual and Family Resources; Nutrition and Food for the individual and Family; Relationships of the Individual and Family; and Textiles and Clothing.

Together, the two aspects form the total program, each complementing and supplementing the other, and provide an opportunity for more individuals to be served through Home Economics Education. There is no need for local school personnel to consider choosing between the two aspects of the program, for they do not supplant one another. Rather, it is important to choose from each aspect those portions which most suitably meet the needs of persons to be served in a community or area of the State. The Statewide program of Home Economics Education provides a curricula structure for each aspect, with guides for adaptation to local and area needs and to the related activities of the Future Homemakers of America program.

MICHIGAN STATE UNIVERSITY,
East Lansing, Mich., June 16, 1967.

Hon. ROMAN C. PUCINSKI,
U.S. House of Representatives,
Washington, D.C.

DEAR CONGRESSMAN PUCINSKI: Section 4(c) of the National Vocational Education Act of 1963 detailed the use of federal funds for support of Research and Developmental activities in Vocational-Technical Education. I hope that information about how such funds are being used will be of value to you in determining the degree of support to be accorded this section of the Act.

Michigan State University established two years ago a major Research and Development Program in Vocational Education. Federal funds under Section 4(c) were instrumental in establishing our program although our College has invested considerable faculty time in the core of the program. As one of several national research programs in vocational education, we feel considerable impact has been made upon local school programs.

Our program is based on a partnership between the local teachers and administrators and MSU faculty in vocational teacher education in approximately 75 high schools in Michigan and four other states: Arizona, Florida, New Jersey, and Washington. Curriculum development projects in cooperation with local schools include the fields of office, distributive and hospitality education.

The attached brief describes only a few ways in which impact is being made on local programs; the brochures describe the scope and direction of our program.

Last year the $10 million Congressional appropriation for Section 4(c) was less than half of the 10 percent authorized by the Act; in addition, this decision, coming late in the fall, resulted in a 46 percent reduction in our funds and in a major cutback in our program. In fact, funds allotted to the local school districts for curriculum development and research activities related to our program had to be eliminated as of February, 1966.

I hope the attached information will assist you in assessing, at least in part, the investment in curriculum development and improvement of instruction which the 4(c) funds have made possible. The full appropriation of research funds for vocational education is necessary if we are to go forward in improving instruction of youth and adults.

Sincerely yours,

PETER G. HAINES, *Director*.

IMPACT OF MICHIGAN STATE UNIVERSITY RESEARCH AND DEVELOPMENT PROGRAM IN VOCATIONAL-TECHNICAL EDUCATION

The R & D Program in Vocational-Technical Education at Michigan State University has been designed to have immediate impact on local school programs. As the first complete school year since the beginning of the projects comes to a close, the nature and scope of this impact on teachers, administrators, curricula, students, and citizens in the communities becomes quite clear. The following are some of the indications of local impact which have been selected from reports from project leaders.

Teachers and Administrators.—More than 450 school personnel have been directly involved through one or more of the seven projects within the R & D Program. This involvement has been through approximately 20 workshops, in addition to planning committees, and similar activities. The impact is evidenced through changes in teaching techniques, changes in procedures for counseling students, and changes in organization of courses to name but a few of the items reported to, and observed by, the Project Leaders.

One school established the position of "Director of Vocational Education," apparently as a direct outcome from their decision to participate in the Evaluation Systems Project. One school involved teachers and administrators in an in-service course on evaluation as one of their approaches to local evaluation of vocational education programs.

Curriculum.—More than 20 new units of instruction have been developed through four projects. These units are being tried out by teachers, will be revised before use the second year, and then will be ready for wider dissemination. Nine units, totaling more than 1000 pages, have been prepared and used in the Distributive Education Project.

Curriculum changes have frequently resulted in schedule changes. For example, in the Vocational Office Block-Time Project approximately one-half of the 39 schools had already prepared their schedules and assigned students to classes before they were invited to participate as pilot schools. However, all were willing to reschedule and improvise so as to make facilities and equipment available to meet the specifications of the new curriculum.

School-Community Relations.—Advisory committees and citizen involvement have been advocated for many years by both general and vocational educators. The Projects in the MSU R & D Program have resulted in the establishment of advisory committees in more than 40 schools. The most outstanding example has been the citizen involvement at Niles, Michigan, through the Evaluation Systems Project. Sixty-five citizens and 23 faculty members have participated in 41 meetings of approximately two hours each—more than 500 man-hours of time from the citizens.

Teachers in the Vocational Office Block-Time Project have involved businessmen in classroom presentations, preparation of special problems (assignments) for students, and on some occasions the grading of student papers.

Teachers have made presentations to their local service clubs, have written stories for the newspapers, and in many other word-of-mouth reports indicated their own enthusiasm for "new" approaches.

Students.—More than 1,200 students are enrolled in the classes which are directly related to the curriculum development projects. In some schools in the Vocational Office Block-Time Project, special emphasis has been placed on instruction for slow-learners. Teachers have reported many cases of students who attain higher levels of occupational competence than would have been attained with the previous curricula.

Publications.—Information about the scope and nature of the projects as well as instructional materials have been produced within the past nine months. These publications have been in such categories as (a) informational brochures to describe the projects, (b) curriculum guides, (c) annotated bibliographies, (d) instructional units, (e) research reports, (f) conference and workshop proceedings, (g) certificates of merit, and (h) others.

To expedite the distribution of publications, an IBM mailing program has been developed which includes approximately 4,000 names and addresses of individuals in vocational education. This listing gives us the capability of producing the names and addresses for many different groups within, or in less than, a two-day period. For example, the address labels for all State Directors of Vocational Education, or all Teacher Educators in Home Economics in all states, or some other similar group, may be produced, ready for application on envelopes, within 48 hours of the time the request is made.

Many requests for some materials have been received. The publication *Greenhouse Plant Production* has been requested by many classroom teachers, throughout the United States.

Many of the teachers involved in the pilot projects have utilized the brochures as a means of informing their colleagues about the research and development activities in which they are involved.

Leadership Development.—Many teachers have had opportunities to be creative, to be imaginative through their roles as research associates. The enthusiasm exhibited by these persons is difficult to describe, but reflected in the willingness of school administrators to continue their participation in the projects even though our financial contribution to the schools was greatly reduced. The general attitude of the administrators is summed up in the comments by one who said, "The enthusiasm of my teacher for her work with your program has caused other teachers in the system to sit up and take notice. We're glad to get the help on curriculum and want to continue under any circumstances."

In addition, the doctoral and masters candidates who have been associated with the projects as research assistants have been provided with experiences in planning, organizing, and conducting conferences and workshops with teachers as well as providing consultant services to the schools. These experiences in the clinical relationship between the schools and the University have been instrumental in shaping and redirecting many of their concepts about the leadership task.

Many other examples and generalizations could be made about the impact of the R & D Program on local school programs and on present and future leaders in vocational education. In addition, many impacts might be noted on the instructional programs at the University—impacts through classes for graduate and undergraduate students taught by project leaders. Finally, there is much evidence of impact on research. Additional information will be supplied upon request.

NATIONAL ASSOCIATION FOR PUBLIC SCHOOL ADULT EDUCATION,
Washington, D.C. April 14, 1967.

Hon. ROMAN C. PUCINSKI,
Chairman, General Subcommittee on Education, House Committee on Education and Labor, Longworth House Office Building, Washington, D.C.

MY DEAR MR. PUCINSKI: As a department of the National Education Association and as a professional association with members in all of the states, the National Association for Public School Adult Education is pleased to support H.R. 7380, the amendments to the Vocational Education Act of 1963. Whenever possible our association and the American Vocational Association attempt to be mutually supportive of legislative programs designed to meet the ever increasing needs of America's undereducated adults.

At the local level many of our members serve dual roles in adult and vocational education with administrative and teaching responsibilities in both areas. Some of our earlier attempts to eradicate America's blight of illiteracy were made possible through the adult basic education provisions of the Vocational Education Act. We feel that H.R. 7380 represents a well-planned program of increasing support for vocational efforts, and we wholeheartedly support it.

If the General Subcommittee on Education would wish to hear testimony from representatives of our organization, we would be glad to cooperate in any way possible.

Cordially,

Monroe C. Neff,
Chairman, Legislative Committee.

Statement of Dr. Howard S. Decker, Executive Secretary, American Industrial Arts Association, NEA

I am hopeful that this statement on H.R. 8525, a Bill to amend the Vocational Education Act of 1963, will be helpful to the Committee in evaluating this Bill

The American Industrial Arts Association is concerned with H.R. 8525, and I, Howard S. Decker, Executive Secretary of this Association, submit this statement as an expression of the concern of the over 10,000 administrators, supervisors, and teachers of industrial arts, who are members of the AIAA.

We are concerned that the proposed amendment, although directly related to vocational education, can have serious implications for the industrial arts profession.

The AIAA, however, is not opposed to this bill. As an Association, we wish to take this opportunity to state our wholehearted support to the efforts of our colleagues in vocational education in the schools of the United States. It has been through the dedicated services of vocational teachers that this nation has had a continuing pool of trained manpower with which to expand the productive capacity of our nation.

Vocational education has made a real impact in the tenth, eleventh, and twelfth grades of our secondary schools and in the post high school where it has provided valuable job-oriented training to the millions of young adults who are entering the world of work upon termination of their courses.

The industrial arts profession, however, is concerned with the exemplary and innovative programs or projects in the Vocational Education section of the Bill which on lines 24 and 25 of page 4 makes reference to the post-elementary student. We interpret the post-elementary student as being a young boy, approximately 12 years of age, who has recently moved from the elementary school into the junior high school. Normally, at this age, boys begin their work in industrial arts education.

A recent study by the U.S. Office of Education compiled by Dr. Marshall Schmitt, Specialist for Industrial Arts, reveals that almost 1,400,000 boys and girls in the seventh and eighth grades of our public schools are enrolled in industrial arts courses. In addition, his statistics reveal that industrial arts is a required subject in both the seventh and eighth grades in about 37 percent of our nation's public secondary schools. His study further indicates that an increasing percentage of the boys of our nation are being required to take industrial arts during this junior high school period.

The objectives of industrial arts education at this level have been described by a distinguished panel of industrial arts supervisors in a brochure entitled, *Industrial Arts Education*, published by the American Council of Industrial Arts Supervisors as:

"Industrial arts is an integral and often required part of the total program of education for all youth at the junior high level (grades seven and eight of elementary schools and grades seven, eight, and nine of junior high schools). Students at this grade level are usually guided through a series of exploratory experiences in a variety of industrial arts areas. Included in a recommended program are crafts (industrial), drafting, electricity-electronics, graphic arts, metalworking, and woodworking.

"In a large school each of these areas may be taught in a separate shop. These facilities are called limited general shops, as they provide facilities for experiences in a number of closely allied activities in a single industrial arts area. For example, a metalworking course includes art metal, casting, finishing, forging, heat treating, metal machining, metal spinning, sheet metal, and welding. Industrial arts may be taught in a comprehensive general shop in schools with a small enrollment. A comprehensive general shop includes activities in two or more areas such as drafting, electricity, electronics, metalworking, and woodworking. In large schools where several shops are available, opportunities should be provided for students to spend from a half semester to a full semester in each shop. In the small schools, where a comprehensive general shop is used, a student should be given a variety of experiences in several areas.

"Special emphasis is given in grades seven, eight, and nine to help students discover and develop their aptitudes, abilities, and interests. Provision is made for the development of a variety of skills and for opportunities for creative activities. An understanding of the industrial-technological world and its effect upon our society is developed. Activities involving the practical application of mathematics, science, language arts, and social studies are inherent in industrial arts. Safe practices in the use and care of materials, tools, and equipment are emphasized. The ability to select, purchase, use, maintain, and service industrial products is stressed. The program assists in developing a degree of proficiency in a variety of basic mechanical skills."[1]

You will note that industrial arts supervisors recommend that special emphasis be given in grades seven, eight, and nine *to help students discover and develop their aptitudes, abilities, and interests*, and that an understanding of the *industrial technological world* and its effect upon our society be developed.

In reading the provisions of HR 8525, page 4, line 24 through page 5 line 9, they seem to indicate that a considerable overlap exists between the provisions of this innovation in vocational education and the existing industrial arts program.

In 1965, Dr. Ralph C. Bohn, currently President of the American Industrial Arts Association, during an address to a joint meeting of the American Council on Industrial Arts Teacher Education and the American Council of Industrial Arts Supervisors listed the following three contributions of industrial arts to the total school program:

"*Industrial arts—pre-collegiate and pre-professional education.*—Includes industrial arts courses designed for the college-bound students, particularly those interested in science, engineering, and technology. This is a special education program planned for the gifted. It is now in existence in many districts. However, it is often excluded from the curriculum for, when considered or tried, it becomes a simple repetition of traditional industrial arts. This is a program on which we must "hang our hat of respectability" and which should be planned to meet the needs of the gifted students found in these classes. It has exciting and challenging possibilities.

"*Industrial arts—general education.*—Includes the study of American industry and the related industrial society. Even though general education often tends to exclude us as a part of this program, we must hold our inclusion since, without it, students will fail to gain a true understanding of the contribution of industry to our economic and sociological world. The idea of teaching only the effect of industry on society without having to understand the concepts and principles of industry is fallacious for it creates an over-simplification and fails to recognize and identify many problems created by industry, and possible solutions to these problems. Industrial arts has and should continue to have a place in general education.

"*Industrial arts—occupational education.*—Includes industrial arts courses of special value to those students who must be employed when they terminate their high school education. This is a recognition of what has been done in the industrial arts program for many years. In general, our objectives have given only brief acceptance to this program. As a result, accomplishment is well below potential. It is very common to hear an industrial arts teacher identify the value of his program by showing how many students are using the knowledge gained in his program either in occupations or as part of professional engineering. This is normal pride and should not be discouraged.

"At the same time, this is not the only function of industrial arts in the school. We should *not* think in terms of a new concept to replace the old; rather, acceptance of the *occupational objective* as a recognition of the current need and status, and an identification of responsibility. This identification permits evaluation and upgrading of instruction.

"Since many of our graduates use knowledge gained in industrial arts in their work, the *occupational function* is more significant for industrial arts than for other regular school subjects, with the possible exception of home economics and business. Naturally, this function has implications for the future engineers and junior college technology graduate as well as the high school graduate entering industry."

The American Industrial Arts Association feels that page 4 line 24 through page 5 line 9 of HR 8525 needs clarification and that safeguards need to be written into this bill to avoid the needless duplication of facilities and instructional programs. Proper recognition should be made of the following facts:

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[1] American Council of Industrial Arts Supervisors. *Industrial Arts Education*. Washington, D.C., McKnight and McKnight Publishing Company. 1963, Section Two, "Program of Industrial Arts Education", p. 7.

1. that a trained industrial arts faculty exists in the junior high schools of the United States, teaching a program which has as one of its objectives an innovation that is described in this bill
2. that these industrial arts classes presently enroll almost 1,400,000 children
3. that these industrial arts programs and teachers have a ready acceptance in the educational community.

Vocational education has an almost overwhelming task in attempting to provide the trained manpower necessary for our nation's industries and businesses.

It would be unfortunate if their task is further complicated by a wasteful duplication of an existing program which has compiled an invaluable record of accomplishments in the junior high schools of our nation.

COLLEGE OF AUTOMATION,
Chicago, Ill., September 27, 1967.

Hon. ROMAN C. PUCINSKI,
Chairman, General Subcommittee on Education,
House of Representatives,
Washington, D.C.

DEAR CONGRESSMAN PUCINSKI: This letter concerns the 1967 Amendments to the Vocational Education Act of 1963.

Specifically, I would like to address my remarks to you concerning the proposals which would permit the U.S. Office of Education and other educational authorities to *contract* with proprietary and profit-making institutions such as a business school like ours, to carry out demonstration projects of an innovative type.

Our objective at the College of Automation is to train young men and women for outstanding opportunities in the fields of Computer Programming and Office Automation. We participate in Vocational Rehabilitation of totally blind students by training them to become Computer Programmers. Presently, we are the only Chicago area school successfully undertaking this educational responsibility. I mention this particular program because it represents a good example of the educational innovation of our school and other quality proprietary business schools like ours.

This successful program was initiated by a blind person who wished to learn computer programming and have a better opportunity during his working life.

There are lots of people in Chicago and throughout the county who need vocational training prior to being employable. And there are more each day.

Our staff at the College of Automation would like to help train the people who cannot afford vocational training. These individuals are probably now unemployed and have very low educational levels.

We feel that the 1967 Amendments to the Vocational Education Act of 1963 are worthwhile proposals and hope that you will consider them favorably. Our belief is that without contract funds for innovation and experimentation we cannot learn how to train and motivate the type of indiivdual who is in need of vocational training.

Sincerely,

J. S. WHITE, *Director.*

MINNESOTA VOCATIONAL ASSOCIATION,
April 5, 1967.

Hon. DONALD M. FRASER,
House Office Building,
Washington, D.C.

DEAR REPRESENTATIVE FRASER: I am writing to voice the deep concern of the 1500 members in the Minnesota Vocational Association and of the hundreds of lay people in all parts of the state who are serving on vocational advisory committees. The vocational leaders and the vocational advisory committee members are dedicated and tireless workers to the end that vocational education programs be geared to meeting the training needs of thousands of Minnesota youth and adults as well as the needs of Minnesota industry for skilled and highly talented workers.

We urge that you give favorable consideration to restoring the funds for the Work Study program. During the 1966–67 school year over 500 youth have been enrolled in Minnesota Vocational education progrems because of the financial support which has come to them through the funds of the Work Study program. We know that the Work Study program has enabled these youth to enroll and to continue in a training program that will make them skilled and self supporting workers and good citizens.

We also urge that you give favorable consideration to the Perkins amendment (House Resolution 2366) to the Vocational Education Act of 1963 which would increase the appropriation under this Act for the fiscal year 1968 to $400 million.

Minnesota has a tremendous stake in vocational education. The Area School Law which was passed by the Minnesota Legislature in 1945 made possible the start of an area school program which today includes 24 very outstanding Area Vocational Technical Schools strategically located throughout the state. The 24 communities in which these schools are located have a building investment of over $60 million. It is significant to note that with the local communities investing $60 million in buildings the return in terms of federal funds to date has been but $3.25 million.

Vocational education is a federally supported program that calls for dollar for dollar matching. In 1967 Minnesota will spend $14,300,000 in state and local funds and will receive but $4,250,000 in federal funds. Unless federal funds are increased, the burden of financing the expanding vocational programs in Minnesota will fall more heavily upon the local communities and the state government. In fact, there is a continuing pressure on the part of federal authorities to expand vocational programs on the local level. Of many areas calling for expanded vocational programs, one of the most critical seems to be in the health field. The need for expansion is apparent in the local communities but unless federal appropriations keep pace with the increased expenditures on the part of the local and the state, many of these needed programs will have to be eliminated from consideration.

Let me point out in the following brief chart the figures for expenditures in Minnesota which indicates very graphically the extent to which the state, local and federal funds are being used in support of vocational education in Minnesota.

	State appropriation	Local	Federal
1966	$5,500,000	$5,000,000	[1] $2,950,000
1967	8,300,000	6,000,000	[1] 3,720,000
1968	9,900,000	7,000,000	[2] 7,000,000

[1] Under the act of 1963.
[2] If Federal appropriation would be raised to $400,000,000.

We feel that the vocational technical program in Minnesota, which in 1966 served sixty thousand high school students, six thousand post high school students and sixty seven thousand adults, is indeed a program that deserves and needs your very serious consideration in support of adequate federal funds to assist the local communities throughout Minnesota, not only to carry on but to improve and to expand a program of vocational education that means so much to the entire citizenry of the state.

The members of the Minnesota Vocational Association and the members of the advisory committee statewide, join me in urging your support for the full appropriation of $400 million called for in the Perkins Amendment to the Vocational Act of 1963.

Very sincerely yours,

Harold M. Ostrem,
Chairman, Legislative Committee.

Madison Vocational, Technical and Adult Schools,
Madison, Wis., April 18, 1967.

Hon. Carl D. Perkins,
Chairman, General Subcommittee on Education,
Rayburn Building, Washington, D.C.

Dear Mr. Perkins: We have been very much concerned with the recommendation made by President Johnson that in the next budget *no funds for the Work Study Program shall be provided for under the Vocational Educational Act of 1963.*

We, here at the Madison Vocational, Technical and Adult Schools, feel that the Work Study Program is one of the finest outcomes of the Vocational Education Act of 1963. It is my understanding it is proposed that this program be absorbed by the Neighborhood Youth Corps. I have been actively involved as a member of the Dane County Board of Directors of the Community Action Commission and with the neighborhood Youth Corps.

If you are interested in having *more red tape* and less efficiency, then I would suggest that the President's recommendation be followed.

In order that you can make a critical appraisal, I would like to supply the following information for you as it relates to our students who participated in the Work Study program for the past two years:

1965–66 SCHOOL YEAR

1. 116 students participated in the Vocational Work Study program during the 1965–66 school year.
2. A total of $28,227 was paid out to these students.
3. Average pay per student amounted to $243.34.
4. Students participating in the Work Study program came to our school from an area ranging from local to 210 miles from Madison. The average distance from school was 60 miles. A breakdown of students according to area is as follows:

Miles from school:	*Number of students*
1 to 15	21
16 to 30	16
31 to 45	17
46 to 60	15
61 to 75	18
76 to 100	19
101 and over	10

1966–67 SCHOOL YEAR

1. To date there are 57 students participating in the Vocational Work Study program during the current school year.
2. It is estimated that the total payroll for this program will amount to about $18,000, an average of approximately $316 per student.
3. Of the estimated $18,000 payroll, the federal reimbursable share will be approximately $13,500 (75%).
4. The 1966–67 participants in the Vocational Work Study program come to school from an average distance of 62 miles from Madison, as follows:

Miles from school:	*Number of students*
1 to 15	6
16 to 30	7
31 to 45	8
46 to 60	11
61 to 75	11
76 to 100	9
101 and over	5

5. These 57 students come from homes with family incomes ranging from 0 to $11,570. The average family income for these homes is $4,830, as follows:

$0 to $2,499	12
$2,500 to $4,999	17
$5,000 to $7,499	20
$7,500 to $9,999	6
$10,000 to $11,750	2

6. Other criteria taken into consideration for determining a student eligible for this program are such things as family assets, existing debt, size of family, number of children in school, etc.

The drop in the number of students participating in the Work Study program is because more rigid screening was carried out on a statewide basis. We have qualified for participation in the Work Study program under Title I, Part C of the Economic Opportunity Act of 1964, Public Law 88–452, for the next school year. This was made possible because of our becoming accepted as a candidate for membership by the North Central Association of Colleges and Secondary Schools.

Next year some of our students in the technical and collegiate transfer programs will be eligible for Work Study funds under Title I, whereas other vocational students will not have Work Study funds made available to them unless we go through another agency. The Neighborhood Youth Corps is not the agency to administer this program.

Under the present policies relating to administration of the Work Study program, under the Vocational Education Act of 1963, we deal directly with students. Our reports relating to reimbursement are submitted directly to the Wisconsin State Board of Vocational, Technical and Adult Education.

The local Board of Vocational and Adult Education has given full support to the Work Study program. It has met the financial and educational needs of students, which is the prime objective. Let us not make a change that could place this worthwhile program in jeopardy.

Sincerely yours,

NORMAN P. MITBY, *Director.*

STATE OF ARKANSAS,
DEPARTMENT OF EDUCATION,
DIVISION OF VOCATIONAL EDUCATION,
Little Rock, Ark., May 3, 1967.

Hon. DAVID PRYOR,
U.S. House of Representatives,
Washington, D.C.

DEAR CONGRESSMAN PRYOR: We are asking Arkansas members of the House to work with Congressman Pucinski in connection with including in his H.R. 7380 an additional amendment to the Vocational Education Act of 1963 (P.L. 88–210). We are extremely interested in having legislation which provides for training in "useful" as well as "gainful" occupations in home economics. Public Law 88–210 presently provides only for training in "gainful" occupations in home economics.

The wage earning aspect ("gainful" occupations) of the home economics program is being developed to serve the needs of adults and students in secondary and post-secondary schools. During the 1966 calendar year 1,432 adults and 113 high school students were trained in occupational home economics in Arkansas. The areas of training included food service preparation, occupational garmet making, clothing service training, day-care center workers, and housekeeping aides. The service occupations field is expanding rapidly; many service occupations related to home economics are in the emergent state. There is a variety of occupations in the fields which opens up possibilities for students of all ability levels.

The homemaking aspect ("useful" occupations) of the home economics program is supportive of the wage-earning aspect. There are knowledges and skills common to both. Separating the two aspects will result in less meaningful educational experiences and less efficiency in program operation.

In 1965–66, Dr. Roy W. Roberts, Professor Emeritus of Vocational Education, University of Arkansas, the home economics supervisory staff, State Department of Education, and 85 home economics teachers in 51 Arkansas counties participated in a research study "Determining Kinds of Gainful Employment in Which Former Homemaking Students from Arkansas Secondary Schools Engage and What Knowledge and Skills Homemaking Curriculums May Contribute to These Gainful Occupations" (Monograph 69). This project which was funded by the U.S. Department of Health, Education, and Welfare, Office of Education, indicated that 76 percent of the students enrolled in high school homemaking courses in 1955 were married and 71 percent had been employed in gainful occupations within a ten-year period.

About one-half of the former students reported that they had acquired competencies in homemaking courses that were used in their gainful occupations. The study indicated that more important skills acquired in homemaking courses and used in gainful employment are technical skills involving cooking, sewing, health care, home management, and child care. The former students also indicated that they had acquired skills in grooming, personal relations, and etiquette which had been of assistance to them in securing and progressing in a gainful occupation.

The homemaker contributes to the economic well-being of the family through her services in the many aspects of the homemaker's role, her skills in selecting and buying goods and services for the family, and her wise use and conservation of her family's material goods.

Sincerely yours,

J. MARION ADAMS,
Associate Commissioner for Vocational and Adult Education.

LIVINGSTON CENTRAL HIGH SCHOOL,
Burna, Ky., April 20, 1967.

HON. FRANK STUBBLEFIELD,
Washington, D.C.

DEAR MR. STUBBLEFIELD: I would like to ask your help on an issue I feel is very important to education; I refer to the Vocational Work Study Program.

As an administrator, I feel it is one of our most effective and economical methods of training students from poor families. It permits us to get practice of vocational skills taught in classes that makes classroom work have a meaning.

We are extremely proud of the ability of these students from poor families to earn their way in college and the scholastic records achieved by them. We can see no other program that produces such outstanding results in producing the student development for which we strive.

If you can help save the Vocational Work Study Program I would be very grateful.

Thank you,

K. T. HARDIN, *Principal.*

[From Pennsylvania Business, July–August 1967]

VOCATIONAL EDUCATION—A PENNSYLVANIA SUCCESS STORY

In October, 1946, the State Chamber released the first of a series of reports concerning vocational education in Pennsylvania. This report contained the following statements:

"A criticism of the public school system frequently voiced in Pennsylvania is that vocational training facilities are inadequate and not sufficiently related to the needs of the state. Analysis of the factual data presently available seems to support this critciism. . . .

"If an expanded and improved system of vocational education is desirable in Pennsylvania, the present and the immediate future offer the best time for its accomplishment."

The following year, the State Chamber surveyed its membership concerning their skilled manpower needs. It was concluded that vocational courses in Pennsylvania secondary schools should be expanded to meet the needs of business and industry.

From this beginning, the State Chamber has been a consistent advocate for expanded and improved vocational education. A printed report, urging the establishment of vocational education facilities, was widely distributed in 1949. Subsequently, in 1959, another report was prepared for promotional purposes. These reports were used by many groups in and out of the state to point up the need for vocational education. But, as of 1963, the record of achievement was not very good.

Pressures by public school teachers for higher salaries, plus a need for a vast school building program to meet the large overall public school enrollment expansion in the 1950's, required a massive increase in school expenditures. Public school expenditures in Pennsylvania increased from $352 million in the 1949–50 school year to $971 million in 1962–63. Vocational education needs were largely by-passed because of a lack of funds.

Vocational education per pupil costs are higher than most other types of education. Much of the training has to be closely supervised and a large capital expenditure is needed for machinery and equipment. This partially explains why vocational education enrollment between 1950 and 1963 (including part-time and evening extension education) increased only from 92,685 to 108,162 while total public secondary school enrollment increased from 595,600 to 903,650. Vocational education was losing ground as a part of the overall education program of the public schools.

There were, however, some encouraging developments during this period of time. In 1953, legislation was enacted in Pennsylvania to set up area technical schools and, in 1957, the State Board of Vocational Education was authorized to set up a state-wide plan for area vocational-technical school attendance areas. Additional State subsidies for area technical schools were also authorized in 1957. The Federal National Defense Education Act of 1958 also provided funds for area vocational education programs.

Despite these legislative incentives, there were only 5 area vocational-technical schools in operation by the 1962–63 school year.

The year 1963 was the turning point. As a result of legislation enacted in Washington and Harrisburg, which provided substantial additional State and Federal funds for vocational education, Pennsylvania is now in the midst of a vocational-technical education revolution.

Within the past three years 18 new area vocational-technical schools started operation, and 11 more are now under construction. Big city enrollments in comprehensive high school vocational education curriculums have also increased substantially since 1963.

It is planned that the state will be blanketed by more than 50 area vocational-technical schools before 1970.

These schools will be of a size that will make available a considerable variety in curriculum offerings. The smallest facility will have 10 different shops or laboratories, while some will have as many as 35. Average size is presently 20 shops or laboratories, with almost double that amount of different curriculum offerings available.

Most of the area vocational-technical schools in Pennsylvania are, and will be, of the "service center" type, with students receiving their specialized shop and laboratory instruction in the area school, and the remainder of their academic work back at their "home" high school.

The so-called comprehensive high schools will continue to conduct the type of vocational education programs that can be offered by that school system without the need of pooling students and resources. In most school districts, however, the more costly and highly specialized programs will tend to be concentrated in the area schools.

Careful thought has been given to the organization of vocational-technical education in Pennsylvania. It is believed that the key to effective programming is strong local control. All area technical schools are required to have advisory councils made up of local businessmen, labor leaders and other civic leaders. The State Chamber has urged all local chambers of commerce to take an active part in the development of the programs of their vocational schools.

The community college system in Pennsylvania also provides a facility for training highly skilled manpower. Many community colleges will have strong technical education programs. These colleges are controlled by local boards of trustees to insure that the curriculums are closely related to the needs of the area served.

However, the Chamber recently pointed out that a fundamental study is needed to assure coordination among the various institutions providing vocational education beyond the high school level. It proposed that a plan be prepared by the State Board of Education to clearly define the scope of operations of various institutions providing educational services in this very important area and that the contributions of private trade and business schools be given careful consideration. The State Board now plans to contract for such a study.

Dr. John W. Stuck, State Supervisor of Vocational Education, explains the State's plan for vocational education as follows:

"Pennsylvania is in the process of developing an overall, comprehensive system of occupational education to make available, to all citizens of the Commonwealth, programs closely correlated with actual or anticipated job opportunities, which are suited to the interests and abilities of individuals. Emphasis is being placed on careful planning of vocational programs so that the needs of boys and girls, young and old, gifted or not so gifted, may be met. Active and competent local advisory committees of all types are required by the state before approvals are given to any proposed programs or buidings.

"The cordinated plan of using comprehensive high schools, area vocational-technical schools, some technical institutes, and community colleges to achieve this aim reflects a policy of flexibility, a willingness to change with the needs, and an enthusiasm to experiment and to also make mistakes, with the knowledge that a dynamic, changing and growing educational system must be developed in just this manner."

It took many years, but the State Chamber's appeal for expanded vocational education appears to have been answered.

The late A. L. Edmonds, Executive Director, was a long time advocate for the development of vocational education. In the Foreward of the State Chamber's latest publication relating to vocational education, Mr. Edmonds summarized the need for this program as follows:

"The industrial wealth of Pennsylvania lies in the fortunate combination of natural resources and the occupational competency of our people. The greatest treasury of the area is not the reserve of natural resources, but the skills and occupational possibilities of the workers and the potential production of the youth preparing to enter employment. This wealth is materially enchanced by vocational educational programs which provide the occupational background to increase the earning power and productive capacity of all individuals. The general economy of the area will reflect this increased earning power potential. Individuals will earn higher salaries; they will enjoy higher standards of living; they will pay higher taxes; and they will be more readily adjustable to changing economic conditions."

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, OFFICE OF EDUCATION—VOCATIONAL EDUCATION

TOTAL OBLIGATIONS, SMITH-HUGHES ACT, GEORGE-BARDEN ACT, AND VOCATIONAL EDUCATION ACT OF 1963 (INCLUDING WORK-STUDY PROGRAMS)

States and outlying areas States and outlying areas	Actual, fiscal year 1964 Actual, fiscal year 1964	Actual, fiscal year 1965 Actual, fiscal year 1965	Actual, fiscal year 1966 Actual, fiscal year 1966	Estimated, fiscal year 1967 Estimated fiscal year 1967
Total	$56,822,245	$168,190,849	$241,811,034	$265,377,278
Alabama	1,185,134	3,693,170	5,485,707	6,094,961
Alaska	208,724	401,889	443,927	549,795
Arizona	345,430	1,348,450	1,999,451	2,219,861
Arkansas	736,706	1,808,619	3,334,972	3,511,377
California	3,244,476	11,283,577	16,921,098	18,650,677
Colorado	531,341	1,571,781	2,285,067	2,547,643
Connecticut	585,450	1,844,225	2,473,643	2,858,345
Delaware	267,427	682,173	655,709	677,401
District of Columbia	130,296	555,222	749,268	805,517
Florida	1,209,280	4,640,146	6,969,543	7,627,358
Georgia	1,461,759	4,699,721	6,743,557	7,522,330
Hawaii	214,705	657,293	1,005,200	1,102,100
Idaho	378,993	878,270	1,112,082	1,305,131
Illinois	2,608,057	6,950,814	10,211,977	11,204,477
Indiana	1,639,633	4,480,463	6,183,872	6,788,130
Iowa	1,531,782	3,041,906	4,105,358	4,473,849
Kansas	768,780	2,167,063	2,906,867	3,380,551
Kentucky	1,465,988	3,904,433	5,340,038	5,777,575
Louisiana	1,121,967	3,546,776	5,220,300	5,780,378
Maine	293,952	1,014,935	1,143,228	1,600,515
Maryland	769,295	2,529,025	3,478,123	4,169,771
Massachusetts	993,250	3,713,220	5,193,352	5,617,118
Michigan	2,152,006	6,471,752	9,580,194	10,374,870
Minnesota	1,417,442	3,598,550	4,850,494	5,355,800
Mississippi	1,200,533	3,145,215	4,321,066	4,542,232
Missouri	1,571,116	4,000,537	5,499,161	6,054,066
Montana	288,422	360,522	981,068	1,172,658
Nebraska	669,437	1,593,919	2,114,163	2,288,896
Nevada	262,571	449,639	580,825	615,762
New Hampshire	252,971	657,220	894,857	1,017,929
New Jersey	1,133,264	4,229,140	6,195,436	6,737,067
New Mexico	300,786	1,044,357	1,499.672	1,650,192
New York	3,456,631	11,851,676	17,449,633	17,733,617
North Carolina	2,377,397	6,087,134	8,515,145	9,253,865
North Dakota	478,162	933,950	1,264,430	1,308,053
Ohio	2,602,817	8,081,288	11,569,084	12,875,078
Oklahoma	875,700	3,025,857	3,751,288	3,965,019
Oregon	590,498	1,703,125	2,364,092	2,649,428
Pennsylvania	2,883,764	9,163,504	13,231,544	14,524,817
Rhode Island	211,870	831,638	1,161,624	1,201,373
South Carolina	1,107,086	3,046,922	4,412,930	4,860,884
South Dakota	449,368	902,923	1,131,620	1,349,438
Tennessee	1,593,404	4,380,353	6,223,178	6,750,191
Texas	2,835,704	9,583,504	14,473,530	15,871,541
Utah	282,136	990,848	1,426,799	1,522,866
Vermont	259,501	523,618	632,913	765,003
Virginia	1,411,883	4,091,193	6,077,712	7,217,368
Washington	866,308	2,523,280	3,662,824	3,938,906
West Virginia	598,728	1,781,873	2,917,892	3,205,887
Wisconsin	1,627,803	3,913,482	5,275,929	5,907,672
Wyoming	190,000	209,728	594,324	616,737
American Samoa	0	0	0	118,796
Guam	80,000	127,874	218,386	248,060
Puerto Rico	1,035,495	3,405,852	4,857,239	5,290,348
Virgin Islands	67,017	67,205	119,643	127,999

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[1] Beginning fiscal year 1965.

VOCATIONAL EDUCATION ACT OF 1963—WORK-STUDY PROGRAMS

States and outlying areas	Actual obligations, fiscal year 1965	Actual obligations, fiscal year 1966	Estimated obligations, fiscal year 1967
Total	$4,758,894	$25,000,000	$10,000,000
Alabama	0	503,159	200,270
Alaska	0	16,542	14,983
Arizona	41,625	210,082	83,404
Arkansas	5,000	368,473	108,875
California	75,000	1,986,982	902,462
Colorado	1,950	201,580	100,385
Connecticut	79,100	173,278	132,847
Delaware	210,000	72,246	24,472
District of Columbia	15,307	75,214	30,964
Florida	135,348	805,821	273,186
Georgia	124,875	621,168	248,714
Hawaii	5,000	112,822	42,451
Idaho	0	11,000	39,455
Illinois	122,333	1,237,149	497,428
Indiana	210,000	613,387	246,716
Iowa	0	300,000	140,339
Kansas	0	125,000	113,370
Kentucky	91,038	489,953	178,295
Louisiana	96,409	537,597	196,774
Maine	27,123	43,571	52,440
Maryland	64,538	190,500	181,791
Massachusetts	329,709	733,300	253,209
Michigan	105,500	1,037,441	421,515
Minnesota	89,158	447,397	180,792
Mississippi	71,165	500,136	138,840
Missouri	107,956	462,063	215,252
Montana	0	2,700	37,956
Nebraska	57,328	185,443	72,916
Nevada	3,668	45,575	19,977
New Hampshire	0	68,995	33,462
New Jersey	259,518	914,011	318,634
New Mexico	28,735	146,539	58,932
New York	823,199	3,030,795	827,049
North Carolina	146,896	724,912	287,669
North Dakota	0	121,118	36,458
Ohio	107,429	1,016,483	510,413
Oklahoma	437,893	429,388	127,853
Oregon	85,276	247,689	100,884
Pennsylvania	283,319	1,404,436	558,857
Rhode Island	47,289	146,707	43,450
South Carolina	0	399,415	158,318
South Dakota	0	34,565	36,957
Tennessee	106,076	627,798	209,259
Texas	108,177	1,601,011	559,357
Utah	41,874	199,770	54,937
Vermont	0	0	20,976
Virginia	0	235,000	242,721
Washington	80,833	402,008	159,816
West Virginia	0	269,735	106,378
Wisconsin	50,000	367,424	207,761
Wyoming	0	59,706	17,979
American Samoa	0	0	1,498
Guam	0	10,504	4,994
Puerto Rico	83,250	424,054	162,813
Virgin Islands	0	8,358	2,497

VOCATIONAL EDUCATION ACT OF 1963—GRANTS TO STATES

States and outlying areas	Actual obligations, fiscal year 1965	Actual obligations, fiscal year 1966	Estimated obligations, fiscal year 1967
Total	$106,614,127	$159,750,000	$198,225,000
Alabama	2,468,136	3,689,854	4,610,512
Alaska	126,646	190,309	245,236
Arizona	977,461	1,460,005	1,805,218
Arkansas	1,072,597	2,085,477	2,519,605
California	8,093,398	11,845,611	14,665,140
Colorado	1,061,265	1,583,685	1,946,059
Connecticut	1,202,305	1,745,306	2,171,198
Delaware	207,947	320,574	390,298
District of Columbia	313,732	447,871	546,495
Florida	3,345,986	5,020,861	6,199,468
Georgia	3,116,914	4,658,862	5,810,089
Hawaii	441,933	678,406	797,792
Idaho	505,465	728,277	890,996
Illinois	4,340,009	6,486,356	8,216,394
Indiana	2,638,819	3,938,841	4,907,895
Iowa	1,592,159	2,354,924	2,883,076
Kansas	1,293,283	1,926,087	2,391,526
Kentucky	2,347,407	3,384,097	4,131,417
Louisiana	2,395,312	3,633,210	4,537,243
Maine	659,435	748,587	1,189,505
Maryland	1,687,884	2,518,328	3,202,493
Massachusetts	2,377,441	3,465,002	4,351,359
Michigan	4,233,714	6,438,336	7,856,956
Minnesota	2,056,455	2,949,360	3,720,844
Mississippi	1,790,109	2,553,274	3,132,779
Missouri	2,326,319	3,459,553	4,274,571
Montana	31,351	646,697	796,156
Nebraska	831,467	1,221,721	1,508,981
Nevada	185,590	275,220	337,727
New Hampshire	396,353	565,379	722,359
New Jersey	2,898,203	4,203,065	5,340,073
New Mexico	723,488	1,064,813	1,302,460
New York	7,705,027	11,053,735	13,630,868
North Carolina	3,647,860	5,416,547	6,711,898
North Dakota	449,788	664,014	794,770
Ohio	5,399,721	7,980,551	9,793,732
Oklahoma	1,744,583	2,487,936	3,005,524
Oregon	1,042,575	1,533,844	1,965,985
Pennsylvania	6,054,450	9,046,388	11,185,718
Rhode Island	515,517	745,666	888,672
South Carolina	1,971,687	2,944,013	3,614,447
South Dakota	458,236	684,515	833,066
Tennessee	2,689,595	4,011,274	4,954,951
Texas	6,726,338	10,129,900	12,595,165
Utah	678,668	960,273	1,200,597
Vermont	264,117	373,162	482,651
Virginia	2,634,105	4,389,284	5,507,219
Washington	1,612,918	2,419,920	2,942,267
West Virginia	1,087,650	1,953,934	2,403,411
Wisconsin	2,337,441	3,368,713	4,173,147
Wyoming	0	277,390	340,700
American Samoa	0	0	35,423
Guam	47,874	71,972	107,156
Puerto Rico	1,807,394	2,904,753	3,599,103
Virgin Islands	0	44,268	56,610

EXPENDITURES FOR VOCATIONAL EDUCATION BY SOURCE OF FUNDS AND BY STATE OR TERRITORY, FISCAL YEAR 1964

State or territory (1)	Total (2)	Federal (3)	State and local		
			Total (4)	State (5)	Local (6)
Total	$332,785,114.29	$55,026,874.51	$277,758,239.78	$124,974,571.80	$152,783,667.98
Alabama	9,977,300.61	1,097,723.23	8,879,577.38	5,523,108.19	3,356,469.19
Alaska	325,790.92	116,065.87	209,725.05	134,119.64	75,605.41
Arizona	2,238,642.14	344,903.57	1,893,738.57	563,929.91	1,329,808.66
Arkansas	4,281,592.11	734,482.65	3,547,109.46	1,315,669.95	2,231,439.51
California	24,998,187.11	3,244,476.00	21,753,711.11	762,100.35	20,991,610.76
Colorado	2,820,242.18	527,627.85	2,292,614.33	304,832.61	1,987,781.72
Connecticut	4,285,275.06	585,450.00	3,699,825.06	3,261,479.89	438,345.17
Delaware	1,370,885.45	261,874.54	1,109,010.91	1,028,250.91	80,760.00
Florida	12,863,100.00	1,206,564.00	11,656,536.00	8,765,295.00	2,891,241.00
Georgia	9,879,352.97	1,461,759.00	8,417,593.97	2,704,954.17	5,712,639.80
Hawaii	1,176,864.59	211,594.00	965,270.59	965,270.59	0
Idaho	1,754,197.44	378,993.00	1,375,204.44	679,863.82	695,340.62
Illinois	12,910,068.42	2,572,259.20	10,337,809.22	3,688,026.41	6,649,782.81
Indiana	6,889,282.76	1,425,955.83	5,463,326.93	1,110,946.03	4,352,380.90
Iowa	5,261,954.42	1,521,594.10	3,740,360.32	867,779.57	2,872,580.75
Kansas	3,258,436.73	752,060.85	2,506,375.88	437,574.55	2,068,801.33
Kentucky	6,123,760.19	1,127,874.75	4,995,885.44	4,725,929.58	269,955.86
Louisiana	7,832,241.79	1,121,956.30	6,710,285.49	994,783.64	5,715,501.85
Maine	950,542.48	275,751.24	674,791.24	320,773.31	354,017.93
Maryland	3,113,205.92	686,844.70	2,426,361.22	1,725,255.61	701,105.61
Massachusetts	11,676,224.08	988,348.46	10,687,875.62	5,277,045.12	5,410,830.50
Michigan	9,885,509.89	2,152,006.00	7,733,503.89	1,423,698.03	6,309,805.86
Minnesota	8,271,699.57	1,417,430.70	6,854,268.87	3,372.089.50	3,482,179.37
Mississippi	5,308,082.62	1,092,858.30	4,215,224.32	1,728,571.15	2,486,653.17
Missouri	6,190,231.00	1,436,285.00	4,753,946.00	817,705.00	3,936,241.00
Montana	1,033,677.17	270,864.06	762,813.11	185,233.95	577,579.16
Nebraska	2,184,860.67	644,897.08	1,539,963.59	268,409.84	1,271,553.75
Nevada	1,450,847.10	262,571.00	1,188,276.10	202,806.43	985,469.67
New Hampshire	751,137.00	248,939.57	502,197.43	180,698.24	321,499.19
New Jersey	5,518,849.59	1,133,264.00	4,385,585.59	1,593,199.96	2,792,385.63
New Mexico	1,441,022.69	300,499.67	1,140,523.02	167,014.82	973,508.20
New York	25,237,743.31	3,456,631.00	21,781,112.31	11,076,589.40	10,704,522.91
North Carolina	15,087,973.59	2,372,380.96	12,715,592.63	8,616,161.50	4,099,431.13
North Dakota	1,878,765.24	472,162.00	1,400,603.24	544,320.44	856,282.80
Ohio	12,401,860.33	2,601,717.84	9,800,142.49	5,126,228.37	4,673,914.12
Oklahoma	7,177,715.25	875,700.00	6,302,015.25	862,795.87	5,439,219.38
Oregon	2,439,048.99	590,386.00	1,848,662.99	682,790.58	1,165,872.41
Pennsylvania	12,324.753.38	2,764,724.58	9,560,028.80	1,982,479.56	7,577,549.24
Rhode Island	740,176.35	180,620.27	559,556.08	97,823.01	461,733.07
South Carolina	6,532,528.44	1,104,913.72	5,427,614.72	3,239,312.72	2,188,302.00
South Dakota	1,226,255.98	369,324.15	856,931.83	58,171.69	798,760.14
Tennessee	7,440,650.41	1,493,298.00	5,947,352.41	1,584,307.24	4,363,045.17
Texas	26,914,500.89	2,636,195.87	24,278,305.02	22,957,609.35	1,320,695.67
Utah	2,001,073.53	282,136.00	1,718,937.53	122,638.74	1,596,298.79
Vermont	1,062,347.19	257,475.83	804,871.36	296,146.25	508,725.11
Virginia	9,793,596.92	1,410,085.50	8,383,511.42	5,130,206.15	3,253,305.27
Washington	7,911,217.38	866,308.00	7,044,909.38	1,610,420.88	5,434,488.50
West Virginia	2,734,275.21	578,925.92	2,155.349.29	452,759.74	1,702,589.55
Wisconsin	7,895,017.64	1,627,803.00	6,267,214.64	1,563,295.05	4,703,919.59
Wyoming	836,568.63	183,011.34	653,557.29	41,418.54	612,138.75
District of Columbia	735,589.56	128,364.00	607,225.56	607,225.56	0
Guam	206,662.76	80,000.00	126,662.76	126,662.76	0
Puerto Rico	3,981,474.14	1,026,581.51	2,954,892.63	2,954,892.63	0
Virgin Islands	202,254.50	58,354.50	143,900.00	143,900.00	0

TOTAL EXPENDITURES FOR VOCATIONAL-TECHNICAL EDUCATION BY SOURCE OF FUNDS AND BY STATE OR TERRITORY, FISCAL YEAR 1965—TENTATIVE AMOUNTS

State or territory	Grand total	Federal [1]	State and local		
			Total	State	Local
(1)	(2)	(3)	(4)	(5)	(6)
Total	$604, 645, 727	$156, 936, 015	$447, 709, 712	$186, 734, 833	$260, 974, 879
Alabama	14, 449, 856	3, 312, 723	11, 137, 133	5, 943, 867	5, 193, 266
Alaska	340, 183	120, 592	219, 591	137, 563	82, 028
Arizona	3, 697, 388	1, 139, 979	2, 557, 409	804, 517	1, 752, 892
Arkansas	6, 176, 080	1, 652, 783	4, 523, 297	1, 498, 545	3, 024, 752
California	53, 863, 310	11, 221, 985	42, 641, 325	796, 111	41, 845, 214
Colorado	4, 556, 808	1, 433, 839	3, 122, 969	415, 624	2, 707, 345
Connecticut	8, 080, 351	1, 783, 460	6, 296, 891	5, 771, 115	525, 776
Delaware	1, 810, 746	418, 974	1, 391, 772	1, 191, 357	200, 415
Florida	17, 814, 618	3, 671, 686	14, 142, 932	8, 491, 178	5, 651, 754
Georgia	17, 061, 420	4, 618, 639	12, 442, 781	4, 490, 614	7, 952, 167
Hawaii	2, 080, 926	652, 495	1, 428, 431	1, 428, 431	0
Idaho	2, 390, 197	878, 270	1, 511, 927	709, 239	802, 688
Illinois	16, 024, 552	5, 522, 469	10, 502, 083	3, 675, 189	6, 826, 894
Indiana	12, 730, 603	4, 063, 691	8, 666, 912	1, 686, 109	6, 980, 803
Iowa	6, 760, 715	2, 413, 956	4, 346, 759	743, 132	3, 603, 627
Kansas	6, 148, 538	2, 089, 300	4, 059, 238	843, 779	3, 215, 459
Kentucky	11, 413, 816	3, 836, 442	7, 577, 374	6, 685, 914	891, 460
Louisiana	10, 415, 443	2, 301, 196	8, 114, 247	914, 630	7, 199, 617
Maine	1, 479, 192	492, 970	986, 222	558, 721	427, 501
Maryland	9, 563, 315	2, 401, 567	7, 161, 748	5, 369, 252	1, 792, 496
Massachusetts	16, 526, 441	3, 650, 374	12, 876, 067	5, 851, 631	7, 024, 436
Michigan	19, 558, 577	6, 471, 752	13, 086, 825	1, 268, 363	11, 818, 462
Minnesota	17, 525, 927	3, 539, 090	13, 986, 837	3, 625, 945	10, 360, 892
Mississippi	9, 471, 308	3, 062, 512	6, 408, 796	2, 643, 748	3, 765, 048
Missouri	8, 881, 869	2, 773, 217	6, 108, 652	889, 493	5, 219, 159
Montana	1, 166, 840	302, 734	864, 106	216, 615	647, 491
Nebraska	3, 412, 439	1, 272, 284	2, 140, 155	288, 873	1, 851, 282
Nevada	1, 867, 971	445, 971	1, 422, 000	257, 290	1, 164, 710
New Hampshire	2, 466, 977	653, 563	1, 813, 414	1, 433, 614	379, 800
New Jersey	12, 632, 441	4, 229, 140	8, 403, 301	3, 581, 982	4, 821, 319
New Mexico	3, 173, 236	1, 017, 223	2, 156, 013	272, 241	1, 883, 772
New York	69, 509, 415	11, 803, 278	57, 706, 137	29, 341, 296	28, 364, 841
North Carolina	23, 790, 690	5, 942, 583	17, 848, 107	11, 668, 244	6, 179, 863
North Dakota	2, 754, 511	933, 950	1, 820, 561	929, 300	891, 261
Ohio	24, 285, 713	8, 037, 830	16, 247, 883	6, 011, 451	10, 236, 432
Oklahoma	10, 881, 181	2, 943, 655	7, 937, 526	885, 216	7, 052, 310
Oregon	5, 138, 918	1, 670, 337	3, 468, 581	1, 432, 650	2, 035, 931
Pennsylvania	31, 787, 061	8, 866, 677	22, 920, 384	8, 547, 683	14, 372, 701
Rhode Island	2, 285, 492	831, 303	1, 454, 189	940, 403	513, 786
South Carolina	9, 894, 956	3, 038, 626	6, 856, 330	4, 260, 949	2, 595, 381
South Dakota	1, 943, 586	714, 479	1, 229, 107	83, 186	1, 145, 921
Tennessee	13, 590, 820	4, 243, 552	9, 347, 268	4, 353, 683	4, 993, 585
Texas	41, 311, 080	9, 033, 178	32, 277, 902	24, 638, 135	7, 639, 767
Utah	4, 933, 617	962, 372	3, 971, 245	161, 098	3, 810, 147
Vermont	1, 445, 190	431, 764	1, 013, 426	272, 349	741, 077
Virginia	13, 899, 421	3, 595, 470	10, 303, 951	5, 821, 341	4, 482, 610
Washington	9, 773, 673	2, 514, 630	7, 259, 043	2, 554, 295	4, 704, 748
West Virginia	5, 162, 657	1, 778, 441	3, 384, 216	463, 027	2, 921, 189
Wisconsin	15, 961, 949	3, 891, 883	12, 070, 066	4, 019, 100	8, 050, 966
Wyoming	871, 150	184, 460	686, 690	56, 852	629, 838
District of Columbia	1, 344, 547	545, 858	798, 689	798, 689	0
Guam	162, 472	79, 707	82, 765	82, 765	0
Puerto Rico	10, 198, 389	3, 391, 502	6, 806, 887	6, 806, 887	0
Virgin Islands	177, 156	55, 604	121, 552	121, 552	0

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[1] Includes Vocational Education Act of 1963, Smith-Hughes and George-Barden Acts.

TOTAL EXPENDITURES, VOCATIONAL EDUCATION, FISCAL YEAR 1966—TENTATIVE AMOUNTS [1]

	Grand total	Federal	State and local		
			Total	State	Local
Total	$792,052,171	$234,640,226	$557,411,945	$213,147,435	$344,264,510
Alabama	18,031,262	4,344,951	13,686,311	6,364,139	7,322,172
Alaska	729,840	358,414	371,426	187,455	183,971
Arizona	6,179,702	1,979,406	4,200,296	1,905,638	2,294,658
Arkansas	9,157,513	3,286,088	5,871,425	3,162,371	2,709,054
California	61,067,992	16,598,470	44,469,522	813,647	43,655,875
Colorado	6,118,322	2,285,067	3,833,255	435,821	3,397,434
Connecticut	9,539,917	2,387,591	7,152,326	6,316,481	835,845
Delaware	2,430,690	614,611	1,816,079	1,623,034	193,045
District of Columbia	1,651,767	748,318	903,449	903,449	0
Florida	30,855,051	6,854,227	24,000,824	5,561,352	18,439,472
Georgia	19,720,627	6,735,082	12,985,545	5,267,122	7,718,423
Hawaii	2,734,335	999,482	1,734,853	1,734,853	0
Idaho	2,940,185	1,108,562	1,831,623	681,536	1,150,087
Illinois	25,464,049	9,853,432	15,610,617	4,719,807	10,890,810
Indiana	16,041,825	5,587,019	10,454,806	1,754,664	8,700,142
Iowa	8,276,648	3,402,756	4,873,892	723,628	4,150,264
Kansas	7,960,435	2,866,961	5,093,474	909,263	4,184,211
Kentucky	13,587,458	5,265,644	8,321,814	6,528,113	1,793,701
Louisiana	14,403,915	5,133,643	9,270,272	644,073	8,626,199
Maine	2,658,676	1,079,630	1,579,046	1,103,453	475,593
Maryland	14,604,853	3,397,094	11,207,759	5,531,651	5,676,108
Massachusetts	26,414,970	5,138,397	21,276,573	8,367,495	12,909,078
Michigan	32,820,856	9,580,194	23,240,662	3,062,570	20,178,092
Minnesota	15,451,761	4,709,329	10,742,432	4,056,175	6,686,257
Mississippi	11,096,642	4,242,516	6,854,126	2,714,491	4,139,635
Missouri	17,595,860	5,463,983	12,131,877	1,188,694	10,943,183
Montana (estimated)	2,709,199	803,199	1,906,000	300,000	1,606,000
Nebraska	4,389,810	1,944,232	2,445,578	495,095	1,950,483
Nevada	4,663,894	535,250	4,128,644	266,573	3,862,071
New Hampshire	4,080,963	814,442	3,266,521	736,065	2,530,456
New Jersey	19,280,777	6,190,533	13,090,244	5,713,221	7,377,023
New Mexico	3,949,576	1,497,711	2,451,865	222,938	2,228,927
New York	74,556,120	18,084,744	56,471,376	27,686,932	28,784,444
North Carolina	29,676,238	8,363,181	21,313,057	14,185,664	7,127,393
North Dakota	3,383,710	1,250,840	2,132,870	887,870	1,245,000
Ohio	32,485,220	10,987,077	21,498,143	9,915,172	11,582,971
Oklahoma	12,882,768	3,739,288	9,143,480	1,100,000	8,043,480
Oregon	7,302,329	2,297,684	5,004,645	2,316,783	2,687,862
Pennsylvania	40,329,014	12,568,131	27,760,883	7,119,942	20,640,941
Rhode Island	4,044,023	1,151,665	2,892,358	2,312,673	579,685
South Carolina	12,887,211	4,397,849	8,489,362	4,696,278	3,793,084
South Dakota	2,878,488	1,079,740	1,798,748	249,887	1,548,861
Tennessee	16,981,048	6,147,642	10,833,406	5,423,469	5,409,937
Texas	54,673,850	14,105,092	40,568,758	28,753,112	11,815,646
Utah	6,026,116	1,425,757	4,600,359	178,753	4,421,606
Vermont	2,108,453	628,811	1,479,642	912,677	566,965
Virginia	19,437,087	5,655,911	13,781,176	6,396,075	7,385,101
Washington	14,432,491	3,649,188	10,783,303	3,677,383	7,105,920
West Virginia	8,370,876	2,918,098	5,452,778	811,139	4,641,639
Wisconsin	19,761,218	5,119,501	14,641,717	5,476,659	9,165,058
Wyoming	1,595,843	591,756	1,004,087	93,439	910,648
U.S. service schools					
Canal Zone					
Guam	166,614	83,713	82,901	82,901	0
Puerto Rico	11,265,399	4,536,962	6,728,437	6,728,437	0
Virgin Islands	198,685	51,362	147,323	147,323	0

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[1] Includes Vocational Education Act of 1963, George-Barden, and Smith-Hughes.

VOCATIONAL EDUCATION—STATE AND LOCAL EXPENDITURES PER DOLLAR OF FEDERAL FUNDS

	1963	1964	1965	1966	Estimated, 1967	Estimated, 1968
Total	$4.66	$5.05	$2.85	$2.38	$2.89	$3.28
Alabama	6.70	8.09	3.36	3.15		
Alaska	1.68	1.81	1.82	1.04		
Arizona	5.23	5.49	2.24	2.12		
Arkansas	4.64	4.83	2.74	1.79		
California	5.04	6.70	3.80	2.68		
Colorado	3.79	4.35	2.18	1.68		
Connecticut	4.24	6.32	3.53	3.00		
Delaware	4.44	4.23	3.32	2.95		
District of Columbia	4.40	4.73	1.46	1.21		
Florida	7.46	9.66	3.85	3.50		
Georgia	4.95	5.76	2.69	1.93		
Hawaii	4.49	4.56	2.19	1.74		
Idaho	3.19	3.63	1.72	1.65		
Illinois	4.39	4.02	1.90	1.58		
Indiana	3.83	3.83	2.13	1.87		
Iowa	2.61	2.46	1.80	1.43		
Kansas	3.10	3.33	1.94	1.78		
Kentucky	4.51	4.43	1.98	1.58		
Louisiana	5.83	5.98	3.53	1.81		
Maine	2.23	2.45	2.00	1.46		
Maryland	3.28	3.53	2.87	3.30		
Massachusetts	11.17	10.81	3.53	4.14		
Michigan	3.43	3.59	2.02	2.43		
Minnesota	4.58	4.84	3.95	2.28		
Mississippi	3.82	3.86	2.09	1.62		
Missouri	3.14	3.31	2.20	2.22		
Montana	2.70	2.82	2.85	2.37		
Nebraska	2.40	2.39	1.68	1.26		
Nevada	3.17	4.53	3.19	7.71		
New Hampshire	1.73	2.02	2.77	4.01		
New Jersey	3.24	3.87	1.99	2.11		
New Mexico	3.42	3.80	2.12	1.64		
New York	5.36	6.30	4.89	3.12		
North Carolina	4.98	5.36	3.00	2.55		
North Dakota	2.80	2.93	1.95	1.71		
Ohio	3.64	3.77	2.02	1.96		
Oklahoma	6.58	7.20	2.70	2.45		
Oregon	3.04	3.13	2.08	2.18		
Pennsylvania	3.40	3.46	2.59	2.21		
Rhode Island	3.14	3.10	1.75	2.51		
South Carolina	4.55	4.91	2.26	1.93		
South Dakota	2.23	2.32	1.72	1.67		
Tennessee	3.90	3.98	2.20	1.76		
Texas	10.19	9.21	3.57	2.88		
Utah	5.13	6.09	4.13	3.23		
Vermont	2.74	3.13	2.35	2.35		
Virginia	5.40	5.95	2.87	2.44		
Washington	5.85	8.13	2.89	2.95		
West Virginia	3.56	3.72	1.90	1.87		
Wisconsin	3.38	3.85	3.10	2.86		
Wyoming	3.42	3.57	3.72	1.70		
Guam	1.16	1.58	1.04	1.00		
Puerto Rico	2.64	2.88	2.01	1.48		
Virgin Islands	2.72	2.77	2.19	2.87		

TOTAL EXPENDITURES FOR ANCILLARY SERVICES IN VOCATIONAL EDUCATION

The need for leadership in vocational education was recognized in the Vocational Education Act of 1963 by designating ancillary services as one of the six purposes for which State allotments may be used. Further, the Act requires that at least three percent of the funds allotted to the States must be expended for ancillary services and activities to assure quality in all vocational education programs. Such services include teacher training, supervision, vocational guidance and counseling, program evaluation, special demonstration and experimental programs, development of instructional materials, and State administration and leadership, including periodic evaluation of State and local vocational education programs and services.

On the attached table is indicated the total expenditures by States of Federal, State, and local funds for ancillary services. In fiscal year 1966 approximately 10 percent of the funds available for expenditure for vocational education was expended for this purpose. The larger portion of the total expenditures was for supervision of vocational education programs. About an equivalent amount was expended for administration and teacher training combined, with the remaining amounts for vocational guidance and research activities.

TOTAL EXPENDITURES FOR ANCILLARY SERVICES (FEDERAL, STATE, AND LOCAL), ALL ACTS FISCAL YEARS 1965–68—VOCATIONAL EDUCATION

	1965	1966	1967 estimated	1968 estimated
Total	$49,262,644	$82,444,122	$90,728,490	$94,850,565
Alabama	844,097	1,439,991	1,583,990	1,655,985
Alaska	49,140	155,487	171,035	178,805
Arizona	436,760	624,084	686,492	717,692
Arkansas	441,434	679,867	747,853	781,843
California	4,956,285	7,664,952	8,431,427	8,814,672
Colorado	516,418	598,340	658,174	688,089
Connecticut	1,252,576	2,133,648	2,367,012	2,473,692
Delaware	146,206	235,867	259,453	271,243
District of Columbia	229,573	201,621	221,783	231,863
Florida	2,869,764	3,104,605	3,415,065	3,570,295
Georgia	916,355	2,008,899	2,209,788	2,310,226
Hawaii	234,082	280,258	308,283	322,293
Idaho	228,628	369,372	406,309	424,774
Illinois	1,313,305	2,413,175	2,654,492	2,775,147
Indiana	834,683	1,302,913	1,433,204	1,498,349
Iowa	641,385	1,701,870	1,872,057	1,957,147
Kansas	756,921	842,232	926,455	968,565
Kentucky	592,144	1,054,929	1,160,421	1,213,166
Louisiana	1,029,465	1,714,062	1,885,468	1,971,168
Maine	115,952	646,564	711,220	743,545
Maryland	256,018	953,000	1,048,300	1,095,950
Massachusetts	1,459,546	1,322,317	1,455,098	1,521,238
Michigan	1,431,241	4,857,534	5,343,287	5,586,162
Minnesota	631,860	1,636,699	1,800,368	1,882,198
Mississippi	451,195	702,967	793,263	828,408
Missouri	615,903	967,699	1,064,468	1,112,848
Montana	154,633	354,000	389,400	407,100
Nebraska	344,935	511,408	562,548	588,118
Nevada	727,263	760,836	836,919	874,959
New Hampshire	105,566	312,506	343,756	359,381
New Jersey	1,770,564	4,631,488	5,094,636	5,326,206
New Mexico	194,097	421,195	463,314	484,369
New York	7,105,901	7,962,601	8,758,861	9,156,991
North Carolina	1,652,175	3,131,083	3,444,191	3,600,741
North Dakota	167,867	354,932	390,425	408,170
Ohio	1,249,083	1,379,046	1,516,950	1,585,900
Oklahoma	470,718	778,306	856,136	895,051
Oregon	571,021	911,994	1,003,193	1,048,788
Pennsylvania	1,329,678	4,747,515	5,222,266	5,459,641
Rhode Island	93,348	190,713	209,784	219,319
South Carolina	578,561	896,082	985,690	1,030,490
South Dakota	99,597	175,521	193,073	201,848
Tennessee	784,792	1,291,340	1,420,474	1,485,039
Texas	1,933,193	4,230,886	4,653,974	4,865,514
Utah	436,026	681,396	749,535	783,600
Vermont	244,140	340,913	375,004	392,049
Virginia	1,395,522	1,989,417	2,188,358	2,287,828
Washington	826,813	1,768,097	1,944,906	2,033,306
West Virginia	217,792	533,106	586,416	613,071
Wisconsin	2,614,712	2,367,618	2,604,379	2,722,759
Wyoming	160,304	260,738	306,811	299,846
Guam	23,574	10,890	11,979	12,519
Puerto Rico	687,333	1,807,543	1,988,297	2,078,672
Virgin Islands	22,500	29,500	32,450	33,925

ENROLLMENT IN VOCATIONAL CLASSES, BY TYPE OF PROGRAM AND BY STATE OR TERRITORY, FISCAL YEAR 1964

State or territory (1)	All programs (2)	Agriculture (3)	Distribution[1] (4)	Health occupations (5)	Home economics (6)	Technical (7)	Trades and industry[2] (8)
Total	4,566,390	860,605	334,126	59,006	2,022,138	221,241	1,069,274
Alabama	129,951	40,383	1,202	613	60,302	2,164	25,287
Alaska	2,667	26	125	12	1,147	20	1,337
Arizona	32,349	2,520	2,980	213	17,094	1,602	7,940
Arkansas	93,476	29,779	3,742	672	46,529	727	12,027
California	499,517	15,429	102,233	9,845	163,467	70,366	138,177
Colorado	54,582	3,253	6,847	492	22,888	3,124	17,978
Connecticut	33,141	929	609	582	5,722	7,833	17,466
Delaware	11,007	819	1,248	111	4,260	387	4,182
Florida	186,950	15,784	20,178	2,311	95,927	13,065	39,685
Georgia	168,119	39,132	7,588	1,120	84,456	1,841	33,982
Hawaii	18,289	1,908	2,408	147	8,752	510	4,564
Idaho	16,492	4,472	306	481	8,080	483	2,670
Illinois	125,899	26,663	4,113	1,739	58,275	4,530	30,579
Indiana	75,151	17,338	2,929	447	39,424	1,703	13,310
Iowa	65,985	26,860	2,233	493	21,422	2,335	12,642
Kansas	45,387	7,526	5,668	1,463	15,727	1,779	13,224
Kentucky	81,828	20,498	2,549	667	37,398	714	20,002
Louisiana	91,954	20,398	2,929	1,115	45,382	3,931	18,199
Maihe	8,769	1,247	257	104	3,868	151	3,142
Maryland	37,861	4,341	1,814	130	17,407	1,601	12,568
Massachusetts	71,991	1,688	2,893	952	39,654	1,648	25,156
Michigan	160,396	16,085	20,885	2,981	63,203	6,965	50,277
Minnesota	108,283	28,536	6,374	923	44,396	5,101	22,953
Mississippi	98,567	43,426	2,405	682	40,469	2,779	8,806
Missouri	69,899	16,492	6,877	1,318	32,339	2,114	10,759
Montana	11,777	3,140	517	231	4,644	461	2,784
Nebraska	31,720	6,757	1,598	395	16,662	606	5,702
Nevada	10,030	517	819	210	4,187	2,333	1,964
New Hampshire	7,892	529	319	176	3,883	806	2,179
New Jersey	37,472	1,505	1,009	1,439	4,645	7,897	20,977
New Mexico	14,003	2,424	874	101	6,882	827	2,895
New York	331,884	10,334	11,949	3,922	192,921	9,021	103,737
North Carolina	187,682	64,021	2,721	2,019	74,085	5,855	38,981
North Dakota	20,239	4,726	686	319	9,359	561	4,588
Ohio	169,788	22,118	8,668	2,412	75,755	1,219	59,616
Oklahoma	73,861	25,619	1,257	1,135	31,617	3,983	10,250
Oregon	33,868	5,579	1,268	741	16,493	1,147	8,640
Pennsylvania	109,292	13,458	5,324	3,447	40,767	6,434	39,862
Rhode Island	11,800	541	73	157	7,715	206	3,108
South Carolina	113,500	42,212	3,384	576	52,574	1,526	13,228
South Dakota	16,486	6,059	943	134	6,743	81	2,526
Tennessee	101,581	24,081	4,055	1,538	51,380	1,748	18,779
Texas	441,111	163,625	32,610	3,799	178,449	13,618	49,010
Utah	27,699	4,312	1,237	373	13,307	1,948	6,522
Vermont	8,002	982	160	139	3,883	647	2,191
Virginia	114,756	22,209	20,296	1,334	46,749	2,304	21,864
Washington	122,237	9,607	5,761	2,291	52,676	10,830	41,072
West Virginia	33,923	6,398	1,023	315	15,913	473	9,801
Wisconsin	152,942	23,250	7,804	1,179	78,615	8,764	33,330
Wyoming	7,964	1,843	219	16	3,804	35	2,047
District of Columbia	8,009	-----------	509	562	3,398	127	3,413
Guam	1,182	223	-----------	-----------	327	-----------	632
Puerto Rico	76,181	8,917	7,640	420	46,489	311	12,404
Virgin Islands	999	87	11	13	628	-----------	260

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[1] Includes 23 enrolled in fisheries occupations.
[2] Includes 1,614 enrolled in fisheries occupations.

ENROLLMENT IN VOCATIONAL CLASSES BY TYPE OF PROGRAM AND BY STATE OR TERRITORY, FISCAL YEAR 1965—TENTATIVE DATA

State or territory (1)	All programs (2)	Agriculture (3)	Distribution (4)	Health (5)	Home economics (6)	Office (7)	Technical (8)	Trades and industry (9)
Total	5,430,611	887,529	333,342	66,772	2,098,520	730,904	225,737	[1] 1,087,807
Alabama	107,080	39,474	1,554	2,147	38,855	1,045	1,769	22,236
Alaska	3,058	42	330	20	1,528	----------	102	1,036
Arizona	38,013	2,668	3,477	271	21,575	49	2,035	7,938
Arkansas	97,898	28,996	4,329	767	48,917	1,167	858	12,864
California	451,792	17,684	57,777	8,170	121,012	36,914	67,264	142,971
Colorado	60,320	3,356	7,537	1,056	24,403	6,133	1,639	16,196
Connecticut	33,723	1,129	1,455	737	9,328	163	9,251	11,660
Delaware	9,232	907	437	241	4,584	----------	408	2,655
Florida	277,018	16,687	20,809	3,003	133,550	52,366	11,325	39,248
Georgia	193,879	57,455	9,311	1,614	82,934	7,877	2,472	32,216
Hawaii	17,529	2,667	343	153	8,810	1,280	320	3,956
Idaho	19,501	4,377	682	438	9,723	1,091	744	2,446
Illinois	150,383	26,341	4,056	1,634	59,555	17,675	6,280	34,842
Indiana	79,121	17,857	6,158	687	39,861	----------	2,512	12,046
Iowa	76,594	25,714	2,668	480	31,728	279	2,669	13,056
Kansas	48,785	6,725	6,565	1,315	15,544	2,279	2,160	14,197
Kentucky	80,952	17,986	2,661	733	38,065	329	895	20,283
Louisiana	103,778	21,398	3,391	1,073	46,990	7,842	5,127	17,957
Maine	21,791	1,118	605	99	16,146	----------	122	3,701
Maryland	120,166	4,183	2,157	151	14,809	81,548	2,407	14,911
Massachusetts	72,023	1,402	1,946	965	41,445	----------	1,695	24,570
Michigan	196,733	15,300	22,358	2,760	89,784	5,804	6,697	14,030
Minnesota	178,519	27,893	6,412	939	98,257	14,842	5,247	24,929
Mississippi	100,857	39,515	3,196	713	44,108	----------	3,463	9,862
Missouri	81,485	16,989	6,342	1,527	43,510	----------	2,446	10,671
Montana	12,430	3,280	389	132	5,069	----------	757	2,803
Nebraska	35,713	8,682	1,623	350	18,607	----------	643	5,808
Nevada	11,723	565	494	232	5,149	291	2,707	2,285
New Hampshire	7,322	525	40	142	4,889	----------	244	1,482
New Jersey	65,950	1,975	1,838	1,193	5,400	31,645	7,756	16,143
New Mexico	19,703	2,404	1,619	104	8,897	4,598	395	1,686
New York	461,113	10,927	14,034	6,081	71,216	253,147	13,174	92,534
North Carolina	200,027	63,916	6,190	2,081	77,199	2,103	4,753	43,785
North Dakota	18,870	5,131	341	391	10,720	----------	610	1,677
Ohio	209,420	22,387	11,059	3,268	103,811	4,616	1,040	63,239
Oklahoma	76,523	24,186	1,615	1,181	32,280	----------	3,850	13,411
Oregon	44,805	6,122	1,849	592	15,931	10,634	1,555	8,122
Pennsylvania	187,243	13,914	9,058	3,772	45,074	68,800	7,000	39,625
Rhode Island	8,374	711	72	93	4,364	----------	217	2,917
South Carolina	126,668	43,034	5,427	663	55,988	7,059	1,745	12,752
South Dakota	17,311	5,823	1,064	151	6,831	----------	214	3,228
Tennessee	107,314	23,348	5,069	2,009	53,787	----------	1,925	21,176
Texas	466,045	172,519	36,363	4,076	185,579	801	14,843	51,864
Utah	51,043	4,291	2,400	422	18,413	16,356	1,398	7,763
Vermont	18,151	913	89	214	13,733	30	668	2,504
Virginia	189,178	24,936	30,642	1,840	70,900	33,815	1,920	25,125
Washington	143,987	10,164	8,634	2,352	57,381	15,780	9,599	40,077
West Virginia	37,121	6,382	1,147	570	17,553	861	759	9,849
Wisconsin	173,826	24,567	8,084	1,765	58,463	27,546	7,582	45,819
Wyoming	6,608	1,758	167	21	3,632	----------	20	1,010
District of Columbia	10,118	----------	1,330	671	3,385	802	122	3,808
Guam	1,464	123	----------	----------	600	----------	----------	741
Puerto Rico	92,210	7,008	6,149	644	48,925	13,337	319	15,828
Virgin Islands	10,121	75	----------	39	9,723	----------	15	269

[1] Includes 2,427 enrolled in fisheries occupations.

ALLOTMENTS TO STATES AND TERRITORIES, GEORGE-BARDEN AND SUPPLEMENTAL ACTS, FISCAL YEARS 1967 AND 1968[1]

State or territory	Grand total	Title I						Title II—practical nurse training	Title III—technical education
		Total	Agriculture	Distributive occupations	Home economics	Trades and industry	Fishery trades and industry		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Grand total, including supplemental acts	$49, 990, 823								
Grand total	49, 685, 823	$29, 685, 823	$10, 309, 997	$2, 602, 298	$8, 182, 825	$8, 215, 703	$375, 000	$5, 000, 000	$15, 000, 000
Alabama	1, 140, 849	681, 872	283, 349	44, 954	213, 135	136, 819	3, 615	114, 744	344, 233
Alaska	259, 576	157, 500	40, 000	15, 000	40, 000	40, 000	22, 500	25, 519	76, 557
Arizona	279, 450	167, 549	40, 000	17, 919	47, 907	59, 848	1, 875	27, 975	83, 926
Arkansas	797, 790	476, 738	233, 263	24, 581	147, 526	69, 493	1, 875	80, 263	240, 789
California	2, 549, 008	1, 518, 605	235, 107	216, 285	309, 808	734, 905	22, 500	257, 601	772, 802
Colorado	434, 455	260, 066	89, 720	24, 136	66, 636	77, 699	1, 875	43, 597	130, 792
Connecticut	461, 753	276, 134	40, 000	34, 887	79, 425	119, 947	1, 875	46, 405	139, 214
Delaware	232, 631	138, 470	40, 000	15, 000	40, 000	40, 000	3, 470	23, 540	70, 621
Florida	967, 146	582, 731	74, 147	68, 138	186, 426	231, 520	22, 500	96, 104	288, 311
Georgia	1, 291, 071	772, 847	286, 460	54, 261	254, 730	168, 921	8, 475	129, 556	388, 668
Hawaii	230, 196	138, 137	40, 000	15, 000	40, 000	40, 000	3, 137	23, 015	69, 044
Idaho	335, 250	200, 854	93, 392	15, 000	50, 586	40, 000	1, 875	33, 599	100, 797
Illinois	2, 130, 336	1, 271, 961	395, 878	138, 727	280, 445	454, 728	2, 183	214, 594	643, 781
Indiana	1, 440, 031	860, 256	341, 459	64, 161	253, 208	199, 553	1, 875	144, 944	434, 831
Iowa	1, 327, 878	792, 837	465, 787	37, 947	186, 127	100, 101	1, 875	133, 760	401, 281
Kansas	784, 270	468, 857	225, 430	29, 980	122, 803	88, 769	1, 875	78, 853	236, 560
Kentucky	1, 324, 728	791, 436	385, 312	41, 808	243, 468	118, 973	1, 875	133, 323	399, 969
Louisiana	912, 068	548, 639	163, 978	44, 820	172, 878	144, 463	22, 500	90, 857	272, 572
Maine	310, 388	189, 729	40, 000	15, 000	68, 224	44, 005	22, 500	30, 165	90, 494
Maryland	666, 815	401, 578	77, 479	42, 669	122, 368	142, 870	16, 192	66, 309	198, 928
Massachusetts	833, 089	499, 852	40, 000	70, 850	122, 251	244, 251	22, 500	83, 309	249, 928
Michigan	1, 798, 634	1, 073, 878	310, 134	107, 655	301, 140	352, 680	2, 269	181, 189	543, 567
Minnesota	1, 312, 235	783, 718	413, 253	46, 978	186, 588	135, 024	1, 875	132, 129	396, 388
Mississippi	1, 163, 305	697, 603	381, 807	29, 973	196, 130	78, 125	11, 568	116, 425	349, 277
Missouri	1, 390, 638	830, 775	380, 371	59, 445	208, 545	180, 539	1, 875	139, 966	419, 897
Montana	299, 881	179, 744	74, 273	15, 000	48, 596	40, 000	1, 875	30, 034	90, 103
Nebraska	642, 728	384, 376	217, 166	19, 422	93, 240	52, 674	1, 875	64, 588	193, 764
Nevada	228, 058	136, 875	40, 000	15, 000	40, 000	40, 000	1, 875	22, 796	68, 387

New Hampshire	228,058	136,875	40,000	15,000	40,000	40,000	1,875	22,796	68,387
New Jersey	876,457	525,922	40,000	83,485	100,051	287,381	15,005	87,634	262,901
New Mexico	245,693	147,401	40,980	15,000	46,895	42,651	1,875	24,573	73,719
New York	2,700,384	1,615,680	228,411	230,941	354,071	786,244	16,013	271,176	813,528
North Carolina	2,032,505	1,212,984	568,575	62,697	397,977	179,046	4,689	204,880	614,641
North Dakota	434,085	259,845	143,764	15,000	59,206	40,000	1,875	43,560	130,680
Ohio	2,201,568	1,315,225	365,400	133,570	373,268	438,894	4,093	221,586	664,757
Oklahoma	735,384	439,679	182,132	32,040	124,772	98,860	1,875	73,926	221,779
Oregon	508,946	306,707	97,276	24,339	96,605	77,890	10,597	50,560	151,679
Pennsylvania	2,343,066	1,400,058	250,585	155,766	464,891	523,751	5,065	235,752	707,256
Rhode Island	231,350	138,253	40,000	15,000	40,000	40,872	2,381	23,274	69,823
South Carolina	973,362	581,229	246,985	32,787	202,470	97,050	1,937	98,033	294,100
South Dakota	436,475	261,271	144,671	15,000	59,725	40,000	1,875	43,801	131,403
Tennessee	1,426,595	852,004	412,688	49,087	245,971	142,383	1,875	143,648	430,943
Texas	2,357,417	1,412,938	488,465	131,826	345,666	424,481	22,500	236,120	708,359
Utah	228,854	137,350	40,000	15,000	40,000	40,475	1,875	22,876	68,628
Vermont	228,058	136,875	40,000	15,000	40,000	40,000	1,875	22,796	68,387
Virginia	1,294,292	774,600	279,355	54,589	254,608	170,542	15,506	129,923	389,769
Washington	723,517	436,578	114,817	39,263	131,487	128,511	22,500	71,735	215,204
West Virginia	604,758	361,713	85,062	25,601	166,073	83,102	1,875	60,761	182,284
Wisconsin	1,364,517	814,720	389,561	54,380	206,572	162,332	1,875	137,449	412,348
Wyoming	228,058	136,875	40,000	15,000	40,000	40,000	1,875	22,796	68,387
District of Columbia	228,058	136,875	40,000	15,000	40,000	40,000	1,875	22,796	68,387
American Samoa	1,875	1,875					1,875		
Guam	55,910	1,875					1,875	13,509	40,526
Puerto Rico	1,423,432	854,924	543,505	32,332	189,326	75,331	14,430	142,127	426,381
Virgin Islands	28,892	1,875					1,875	6,754	20,263
Total, supplemental acts	305,000								
American Samoa	80,000								
Guam	80,000								
Puerto Rico	105,000								
Virgin Islands	40,000								

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[1] Based upon U.S. census of population, 1960.

ACTUAL OBLIGATIONS OF GRANT FUNDS FOR VOCATIONAL EDUCATION STATE BY STATE UNDER THE GEORGE-BARDEN AND SUPPLEMENTAL ACTS FOR THE FISCAL YEAR ENDED JUNE 30, 1964

State or possession	Grand total	Title I						Title II—Practical nurse training	Title III—Technical Education
		Total	Agriculture	Distributive occupations	Home economics	Trades and industry	Fishery trades and industry		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Grand total, including Supplemental Acts	$49,660,790								
Total	49,435,790	$29,435,790	$10,309,997	$2,602,298	$8,182,825	$8,215,703	$124,967	$5,000,000	$15,000,000
Alabama	1,041,804	688,060	289,310	45,518	213,135	136,819	3,278	114,744	239,000
Alaska	178,724	123,167	20,000	15,000	40,000	40,000	8,167	4,000	51,557
Arizona	293,641	166,740	40,841	18,144	47,907	59,848	0	27,975	98,926
Arkansas	651,599	480,547	238,170	24,890	147,526	69,493	468	80,263	90,789
California	2,710,409	1,503,767	240,053	219,001	309,808	734,905	0	288,541	918,101
Colorado	464,597	260,381	91,607	24,439	66,636	77,699	0	48,833	155,383
Connecticut	492,903	275,538	40,841	35,325	79,425	119,947	0	51,977	165,388
Delaware	237,427	140,439	40,841	15,188	40,000	40,000	4,410	26,367	70,621
Florida	1,021,722	571,557	75,707	68,994	186,426	231,520	8,910	107,647	342,518
Georgia	1,289,303	771,079	292,486	54,942	254,730	168,921	0	129,556	388,668
Hawaii	183,044	136,029	40,841	15,188	40,000	40,000	0	25,015	22,000
Idaho	339,563	201,132	95,357	15,188	50,587	40,000	0	37,634	100,797
Illinois	2,247,738	1,279,848	404,206	140,469	280,445	454,728	0	239,594	728,296
Indiana	1,446,145	866,370	348,642	64,967	253,208	199,553	0	144,944	434,831
Iowa	1,409,226	801,237	475,586	38,423	187,127	100,101	0	131,260	476,729
Kansas	677,395	466,982	225,430	29,980	122,803	88,769	0	53,853	156,560
Kentucky	1,322,853	789,561	385,312	41,808	243,468	118,973	0	133,323	399,969
Louisiana	987,674	562,086	167,428	45,383	172,878	144,463	31,934	101,768	323,820
Maine	245,770	171,982	40,841	7,500	68,224	44,005	11,412	33,788	40,000
Maryland	650,623	385,386	77,479	42,669	122,368	142,870	0	66,309	198,928
Massachusetts	813,789	480,552	40,000	70,850	122,251	244,251	3,200	83,309	249,928
Michigan	1,854,241	1,079,485	316,658	109,007	301,140	352,680	0	181,189	593,567
Minnesota	1,275,513	791,126	421,946	47,568	186,588	135,024	0	147,999	336,388
Mississippi	1,093,225	697,523	389,839	29,973	196,130	78,125	3,456	83,425	312,277
Missouri	1,397,511	837,648	388,373	60,191	208,545	180,539	0	139,966	419,897
Montana	249,757	179,620	75,836	15,188	48,596	40,000	0	20,034	50,103
Nebraska	605,166	387,314	221,735	19,665	93,240	52,674	0	51,088	166,764
Nevada	232,571	135,188	40,000	15,188	40,000	40,000	0	23,996	73,387
New Hampshire	218,921	125,000	40,000	5,000	40,000	40,000	0	25,534	68,387

New Jersey	931,361	520,870	40,841	84,533	100,051	287,381	8,064	98,160	312,331
New Mexico	257,679	145,526	40,980	15,000	46,895	42,651	0	24,573	87,580
New York	2,881,315	1,618,654	233,216	233,841	354,071	786,244	11,282	296,176	966,485
North Carolina	2,155,604	1,236,083	580,536	63,484	397,977	179,046	15,040	204,880	714,641
North Dakota	435,422	261,182	146,788	15,188	59,206	40,000	0	43,560	130,680
Ohio	2,233,452	1,320,496	373,087	135,247	373,268	438,894	0	248,199	664,757
Oklahoma	779,442	442,038	185,964	32,442	124,772	98,860	0	73,926	263,478
Oregon	516,885	298,574	99,322	24,645	96,605	77,890	112	56,632	161,679
Pennsylvania	2,446,588	1,400,265	255,857	155,766	464,891	523,751	0	264,067	782,256
Rhode Island	173,969	124,872	37,000	7,000	40,000	40,872	0	23,274	25,823
South Carolina	992,329	584,900	252,181	33,199	202,470	97,050	0	58,033	349,396
South Dakota	406,428	262,627	147,714	15,188	59,725	40,000	0	43,801	100,000
Tennessee	1,434,018	859,427	421,370	49,703	245,971	142,383	0	143,648	430,943
Texas	2,476,102	1,410,271	498,741	133,481	345,666	424,481	7,902	264,479	801,352
Utah	243,658	136,504	40,841	15,188	40,000	40,475	0	25,624	81,530
Vermont	226,183	135,000	40,000	15,000	40,000	40,000	0	22,796	68,387
Virginia	1,238,747	762,426	279,355	54,589	254,608	170,542	3,332	129,923	346,398
Washington	753,002	416,986	117,232	39,756	131,487	128,511	0	80,350	255,666
West Virginia	507,388	361,627	86,851	25,601	166,073	83,102	0	45,761	100,000
Wisconsin	1,465,556	821,723	397,756	55,063	206,572	162,332	0	153,957	489,876
Wyoming	160,000	135,000	40,000	15,000	40,000	40,000	0	10,000	15,000
District of Columbia	130,296	95,000	0	15,000	40,000	40,000	0	22,796	12,500
Guam	0							0	
Puerto Rico	930,495	730,395	429,000	32,738	189,326	75,331	4,000	54,700	145,400
Virgin Islands	27,017							6,754	20,263
Total, supplemental acts	225,000								
Guam	80,000								
Puerto Rico	105,000								
Virgin Islands	40,000								

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[1] These allotments are adjusted on the basis of the reallotment provision of the appropriation act of 1964 and are the actual amounts available for expenditure by States for fiscal year 1964.

ACTUAL OBLIGATIONS OF GRANT FUNDS FOR VOCATIONAL EDUCATION, STATE BY STATE, UNDER THE GEORGE-BARDEN AND SUPPLEMENTAL ACTS FOR THE FISCAL YEAR ENDED JUNE 30, 1965[1]

State or possession	Grand total	Title I						Title II—practical nurse training	Title III—technical education
		Total	Agriculture	Distributive occupations	Home economics	Trades and industry	Fishery trades and industry		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Grand total including supplemental acts	$49, 656, 373								
Total	49, 431, 373	$29, 431, 373	$10, 309, 997	$2, 602, 298	$8, 182, 825	$8, 215, 703	$120, 550	$5, 000, 000	$15, 000, 000
Alabama	1, 081, 704	679, 535	283, 349	44, 954	213, 135	136, 819	1, 278	117, 936	284, 233
Alaska	245, 243	143, 167	40, 000	15, 000	40, 000	40, 000	8, 167	25, 519	76, 557
Arizona	277, 575	165, 674	40, 000	17, 919	47, 907	59, 848	0	27, 975	83, 926
Arkansas	645, 915	474, 863	233, 263	24, 581	147, 526	69, 493	0	80, 263	90, 789
California	2, 581, 112	1, 496, 105	235, 107	216, 285	309, 808	734, 905	0	264, 767	820, 240
Colorado	441, 822	258, 191	89, 720	24, 136	66, 636	77, 699	0	44, 810	138, 821
Connecticut	470, 273	274, 817	40, 000	34, 887	79, 425	119, 947	558	47, 696	147, 760
Delaware	234, 226	139, 410	40, 000	15, 000	40, 000	40, 000	4, 410	24, 195	70, 621
Florida	971, 254	569, 141	74, 147	68, 138	186, 426	231, 520	8, 910	96, 104	306, 009
Georgia	1, 285, 476	767, 252	286, 460	54, 261	254, 730	168, 921	2, 880	129, 556	388, 668
Hawaii	178, 699	135, 000	40, 000	15, 000	40, 000	40, 000	0	23, 655	20, 044
Idaho	333, 375	198, 979	93, 392	15, 000	50, 387	40, 000	0	33, 599	100, 797
Illinois	2, 128, 153	1, 269, 778	395, 878	138, 727	280, 445	454, 728	0	214, 594	643, 781
Indiana	1, 438, 156	858, 381	341, 459	64, 161	253, 208	199, 553	0	144, 944	434, 831
Iowa	1, 327, 191	792, 150	465, 787	37, 947	187, 127	100, 101	1, 188	133, 760	401, 281
Kansas	782, 395	466, 982	225, 430	29, 980	122, 803	88, 769	0	78, 853	236, 560
Kentucky	1, 322, 853	789, 561	385, 312	41, 808	243, 468	118, 973	0	133, 323	399, 969
Louisiana	920, 762	538, 073	163, 978	44, 820	172, 878	144, 463	11, 934	93, 385	289, 304
Maine	280, 195	178, 641	40, 000	15, 000	68, 224	44, 005	11, 412	30, 165	71, 389
Maryland	657, 931	392, 694	77, 479	42, 669	122, 368	142, 870	7, 308	66, 309	198, 928
Massachusetts	826, 609	493, 372	40, 000	70, 850	122, 251	244, 251	16, 020	83, 309	249, 928
Michigan	1, 834, 773	1, 071, 609	310, 134	107, 655	301, 140	352, 680	0	186, 230	576, 934
Minnesota	1, 311, 008	782, 491	413, 253	46, 978	186, 588	135, 024	648	132, 129	396, 388
Mississippi	1, 176, 633	689, 491	381, 807	29, 973	196, 130	78, 125	3, 456	116, 425	370, 717
Missouri	1, 392, 657	828, 900	380, 371	59, 445	208, 545	180, 539	0	143, 860	419, 897
Montana	290, 506	177, 869	74, 273	15, 000	48, 596	40, 000	0	22, 534	90, 103
Nebraska	640, 853	382, 501	217, 166	19, 421	93, 240	52, 674	0	64, 588	193, 764
Nevada	230, 381	135, 000	40, 000	15, 000	40, 000	40, 000	0	22, 796	72, 585
New Hampshire	226, 817	135, 000	40, 000	15, 000	40, 000	40, 000	0	23, 430	68, 387
New Jersey	869, 516	518, 981	40, 000	83, 485	100, 051	287, 381	8, 064	87, 634	262, 901

New Mexico	249,027	145,526	40,980	15,000	46,895	42,651	0	25,257	78,244
New York	2,748,134	1,605,949	228,411	230,941	354,071	786,244	6,282	278,720	863,465
North Carolina	2,070,585	1,213,335	568,575	62,697	397,977	179,046	5,040	204,880	652,370
North Dakota	441,422	257,970	143,764	15,000	59,206	40,000	0	44,772	138,680
Ohio	2,204,773	1,312,266	365,400	133,570	373,268	438,894	1,134	227,750	664,757
Oklahoma	747,123	437,804	182,132	32,040	124,772	98,860	0	73,926	235,393
Oregon	501,661	299,422	97,276	24,339	96,605	77,890	3,312	50,560	151,679
Pennsylvania	2,388,559	1,395,578	250,585	155,766	464,891	523,751	585	242,311	750,670
Rhode Island	230,931	137,834	40,000	15,000	40,000	40,872	1,962	23,274	69,823
South Carolina	960,478	579,292	246,985	32,787	202,470	97,050	0	69,033	312,153
South Dakota	401,747	259,396	144,671	15,000	59,725	40,000	0	43,801	98,550
Tennessee	1,425,296	850,705	412,688	49,087	245,971	142,383	576	143,648	430,943
Texas	2,389,387	1,398,340	488,465	131,826	345,666	424,481	7,902	242,688	748,359
Utah	231,828	135,475	40,000	15,000	40,000	40,475	0	23,512	72,841
Vermont	226,183	135,000	40,000	15,000	40,000	40,000	0	22,796	68,387
Virginia	1,283,952	764,260	279,355	54,589	254,608	170,542	5,166	129,923	389,769
Washington	716,223	414,078	114,817	39,263	131,487	128,511	0	73,731	228,414
West Virginia	602,883	359,838	85,062	25,601	166,073	83,102	0	60,761	182,284
Wisconsin	1,363,794	813,997	389,561	54,380	206,572	162,332	1,152	137,449	412,348
Wyoming	179,728	135,000	40,000	15,000	40,000	40,000	0	15,000	29,728
District of Columbia	226,183	135,000	40,000	15,000	40,000	40,000	0	22,796	68,387
Guam	0	0						0	0
Puerto Rico	1,410,208	841,700	543,505	32,332	189,326	75,331	1,206	142,127	426,381
Virgin Islands	27,205	0						6,942	20,263
Total, supplemental acts	225,000								
Guam	80,000								
Puerto Rico	105,000								
Virgin Islands	40,000								

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[1] These allotments are adjusted on the basis of the reallotment provision of the Appropriation Act of 1965, and are the actual amounts available for expenditure by States for fiscal year 1965.

ACTUAL OBLIGATIONS TO STATES AND TERRITORIES, GEORGE-BARDEN AND SUPPLEMENTAL ACTS, FISCAL YEAR 1966[1]

State or territory	Grand total	Title I						Title II—practical nurse training	Title III—technical education
		Total	Agriculture	Distributive occupations	Home economics	Trades and industry	Fishery trades and industry		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Grand total, including supplemental acts	$49,899,579								
Grand total	49,674,579	$29,674,579	$10,309,997	$2,602,298	$8,182,825	$8,215,703	$363,756	$5,000,000	$15,000,000
Alabama	1,149,364	683,872	283,349	44,954	213,135	136,819	5,615	116,001	549,461
Alaska	207,076	145,000	40,000	15,000	40,000	40,000	10,000	11,519	50,557
Arizona	277,575	165,674	40,000	17,919	47,907	59,848	0	27,975	83,926
Arkansas	795,915	474,863	233,263	24,581	147,526	69,493	0	80,263	240,789
California	2,554,438	1,496,105	235,107	216,285	309,808	734,905	0	266,480	791,853
Colorado	433,058	258,191	89,720	24,136	66,636	77,699	0	44,075	130,792
Connecticut	462,512	274,259	40,000	34,887	79,425	119,947	0	46,915	141,340
Delaware	232,889	138,470	40,000	15,000	40,000	40,000	3,470	23,798	70,621
Florida	955,303	565,431	74,147	68,138	186,426	231,520	5,200	97,157	292,715
Georgia	1,291,071	772,847	286,460	54,261	254,730	168,921	8,475	129,006	386,666
Hawaii	182,311	135,000	40,000	15,000	40,000	40,000	0	23,267	24,044
Idaho	333,375	198,979	93,392	15,000	50,587	40,000	0	33,599	160,797
Illinois	2,128,153	1,269,778	395,878	138,727	280,445	454,728	0	214,594	643,781
Indiana	1,438,156	858,381	341,459	64,161	253,208	199,553	0	144,944	434,801
Iowa	1,327,878	792,837	465,787	37,947	187,127	100,101	1,875	133,760	401,281
Kansas	764,395	466,982	225,430	29,980	122,803	88,769	0	60,853	286,560
Kentucky	1,322,853	789,561	385,312	41,808	243,468	118,973	0	133,323	399,969
Louisiana	915,200	548,639	163,978	44,820	172,878	144,463	22,500	93,989	272,572
Maine	302,888	182,229	40,000	15,000	68,224	44,005	15,000	30,165	90,494
Maryland	650,623	385,386	77,479	42,669	122,368	142,870	0	66,309	198,928
Massachusetts	815,589	482,352	40,000	70,850	122,251	244,251	5,000	83,309	249,928
Michigan	1,806,652	1,071,609	310,134	107,655	301,140	352,680	0	183,174	551,869
Minnesota	1,311,808	781,843	413,253	46,978	186,588	135,024	0	133,577	396,388
Mississippi	1,160,348	686,035	381,807	29,973	196,130	78,125	0	116,425	357,888
Missouri	1,403,940	828,900	380,371	59,445	208,545	180,539	0	144,791	430,249
Montana	293,006	177,869	74,273	15,000	48,596	40,000	0	25,034	90,103
Nebraska	642,728	384,376	217,166	19,421	93,240	52,674	1,875	64,588	193,764
Nevada	230,030	136,375	40,000	15,000	40,000	40,000	1,375	23,582	70,073
New Hampshire	226,433	135,000	40,000	15,000	40,000	40,000	0	23,046	68,387

New Jersey	876,457	525,922	40,000	83,485	100,051	287,381	15,005	87,634	262,901
New Mexico	245,213	145,526	40,980	15,000	46,895	42,651	0	24,842	74,845
New York	2,789,787	1,675,680	228,411	230,941	354,071	786,244	76,013	280,523	833,584
North Carolina	2,151,893	1,322,984	568,575	62,697	397,977	179,046	114,689	204,880	624,029
North Dakota	436,558	259,845	143,764	15,000	59,206	40,000	1,875	44,037	132,676
Ohio	2,202,685	1,311,132	365,400	133,570	373,268	438,894	0	226,796	664,757
Oklahoma	737,706	437,804	182,132	32,040	124,772	98,860	0	74,736	225,166
Oregon	508,946	306,707	97,276	24,339	96,605	77,890	10,597	50,560	151,679
Pennsylvania	2,343,544	1,394,993	250,585	155,766	464,891	523,751	0	241,295	707,256
Rhode Island	231,350	138,253	40,000	15,000	40,000	40,872	2,381	23,274	69,823
South Carolina	954,745	579,292	246,985	32,787	202,470	97,050	0	74,103	301,350
South Dakota	369,600	259,396	144,671	15,000	59,725	40,000	0	43,801	66,403
Tennessee	1,424,720	850,129	412,688	49,087	245,971	142,383	0	143,648	430,943
Texas	2,383,017	1,412,938	488,465	131,826	345,666	424,481	22,500	244,258	725,821
Utah	228,278	135,475	40,000	15,000	40,000	40,475	0	23,127	69,676
Vermont	226,433	135,000	40,000	15,000	40,000	40,000		23,046	68,387
Virginia	1,280,292	760,600	279,355	54,589	254,608	170,542	1,506	129,923	389,769
Washington	727,590	436,578	114,817	39,263	131,487	128,511	22,500	72,521	218,491
West Virginia	602,883	359,838	85,062	25,601	166,073	83,102	0	60,761	182,284
Wisconsin	1,377,545	812,845	389,561	54,380	206,572	162,332	0	142,187	422,513
Wyoming	227,228	135,000	40,000	15,000	40,000	40,000	0	22,796	69,432
American Samoa	0	0	0	0	0	0	0	0	0
District of Columbia	226,183	135,000	40,000	15,000	40,000	40,000	0	22,796	68,387
Guam	55,910	1,875	0	0	0	0	1,875	13,509	40,526
Puerto Rico	1,423,432	854,924	543,505	32,332	189,326	75,331	14,430	142,127	426,381
Virgin Islands	27,017	0	0	0	0	0	0	6,754	20,263
Total, supplemental acts	225,000								
American Samoa	0								
Guam	80,000								
Puerto Rico	105,000								
Virgin Islands	40,000								

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[1] Based upon U.S. Census of Population, 1960.

ANNUAL ALLOTMENTS TO STATES, SMITH-HUGHES FUNDS, DECENNIAL PERIOD ENDING JUNE 30, 1971,[1] FISCAL YEARS 1964, 1965, 1966, AND 1967

State (1)	Total (2)	Agriculture (3)	Trades and industry and home economics (4)	Teacher training (5)
Total	$7,161,455	$3,016,355	$3,041,787	$1,103,313
Alabama	143,330	81,863	43,17[illegible]	18,295
Alaska	30,000	10,000	10,000	10,000
Arizona	51,789	18,401	23,388	10,000
Arkansas	85,107	56,663	18,440	10,004
California	534,067	118,994	327,051	88,022
Colorado	66,744	25,594	31,150	10,000
Connecticut	92,547	30,506	47,843	14,198
Delaware	30,000	10,000	10,000	10,000
Florida	187,558	71,604	88,223	27,731
Georgia	172,456	97,839	52,534	22,083
Hawaii	31,661	10,000	11,661	10,000
Idaho	39,430	19,430	10,000	10,000
Illinois	360,319	107,716	196,145	56,458
Indiana	193,488	97,255	70,121	26,112
Iowa	122,556	71,873	35,240	15,443
Kansas	91,385	47,167	32,017	12,201
Kentucky	143,135	93,514	32,606	17,015
Louisiana	134,293	66,401	49,651	18,241
Maine	48,182	26,204	11,978	10,000
Maryland	118,672	47,000	54,307	17,365
Massachusetts	179,461	46,955	103,672	28,834
Michigan	297,765	115,665	138,287	43,813
Minnesota	141,929	71,666	51,144	19,119
Mississippi	107,308	75,332	19,778	12,198
Missouri	173,605	80,100	69,312	24,193
Montana	38,665	18,665	10,000	10,000
Nebraska	64,271	35,813	18,458	10,000
Nevada	30,000	10,000	10,000	10,000
New Hampshire	34,050	14,050	10,000	10,000
New Jersey	201,903	38,429	129,498	33,976
New Mexico	43,107	18,012	15,095	10,000
New York	575,316	135,995	345,334	93,987
North Carolina	221,793	152,859	43,418	25,516
North Dakota	42,740	22,740	10,000	10,000
Ohio	369,365	143,369	171,636	54,360
Oklahoma	96,258	47,924	35,295	13,039
Oregon	73,613	37,105	26,508	10,000
Pennsylvania	437,176	178,560	195,223	63,393
Rhode Island	37,901	10,000	17,901	10,000
South Carolina	114,757	77,766	23,647	13,344
South Dakota	42,940	22,940	10,000	10,000
Tennessee	159,386	94,475	44,934	19,977
Texas	359,602	132,767	173,185	53,650
Utah	38,478	12,402	16,076	10,000
Vermont	33,318	13,318	10,000	10,000
Virginia	173,136	97,792	53,128	22,216
Washington	113,306	50,503	46,824	15,979
West Virginia	91,340	63,787	17,134	10,419
Wisconsin	162,247	79,342	60,773	22,132
Wyoming	30,000	10,000	10,000	10,000

[1] Based upon U.S. Census of Population, 1960.

OBLIGATIONS FOR FISCAL YEAR 1967—JULY 1, 1966, THROUGH MAR. 31, 1967

	Smith-Hughes Act	George-Barden Act			
		Title I	Title II	Title III	Total
Total	$6,668,787	$26.797,035	$4,488,175	$13,451,144	$44,736,354
Alabama	71,666	340,938	57,372	172,117	570,427
Alaska	30,000	157,500	25,519	76,557	259,576
Arizona	51,789	167,549	27,975	83,926	279,450
Arkansas	85,107	476,738	80,263	240,789	797,790
California	534,067	1,518,605	257,601	772,802	2,549,008
Colorado	66,744	260,066	43,597	130,792	434,455
Connecticut	92,547	274,259	46,405	139,214	459,878
Delaware	30,000	138,470	23,540	70,621	232,631
District of Columbia		135,000	22,796	54,975	212,771
Florida	187,558	582,731	96,104	288,311	967,146
Georgia	172,456	772,847	129,556	388,668	1,291,071
Hawaii	15,832	69,069	11,508	34,522	115,099
Idaho	39,430	198,979	33,599	100,797	333,375
Illinois	360,319	1,271,961	214,594	643,781	2,130,336
Indiana	193,488	860,256	144,944	434,831	1,440,031
Iowa	61,279	396,421	66,880	200,641	663,942
Kansas	45,694	234,430	39,427	118,280	392,137
Kentucky	71,568	395,719	66,662	199,985	662,366
Louisiana	134,293	548,639	90,857	272,572	912,068
Maine	48,182	189,729	30,165	90,494	310,388
Maryland	118,672	401,578	66,309	198,928	666,815
Massachusetts	179,461	499,852	83,309	249,928	833,089
Michigan	297,765	1,073,878	181,189	543,567	1,798,634
Minnesota	70,965	391,860	66,065	198,194	656,119
Mississippi	107,308	697,603	116,425	349,277	1,163,305
Missouri	173,605	830,775	139,966	419,897	1,390,638
Montana	19,333	89,873	15,017	45,052	149,942
Nebraska	64,271	384,376	64,588	193,764	642,728
Nevada	30,000	136,875	22,796	68,387	228,058
New Hampshire	34,050	136,875	22,796	68,387	228,058
New Jersey	201,903	525,922	87,634	262,901	876,457
New Mexico	43,107	147,401	24,573	73,719	245,693
New York	575,316	1,615,680	271,176	813,528	2,700,384
North Carolina	221,793	1,212,984	204,880	614,641	2,032,505
North Dakota	42,740	259,845	43,560	130,680	434,085
Ohio	369,365	1,315,225	221,586	664,757	2,201,568
Oklahoma	96,258	439,679	73,926	221,779	735,384
Oregon	73,613	306,707	50,560	151,679	508,946
Pennsylvania	437,176	1,400,058	235,752	707,256	2,343,066
Rhode Island	37,901	138,253	23,274	69,823	231,350
South Carolina	114,757	581,229	98,033	294,100	973,362
South Dakota	42,940	259,396	43,801	131,403	434,600
Tennessee	79,694	426,004	71,824	215,472	713,300
Texas	359,602	1,412,938	236,120	708,359	2,357,417
Utah	38,478	137,350	22,876	68,628	228,854
Vermont	33,318	136,875	22,796	68,387	228,058
Virginia	173,136	774,600	129,923	389,769	1,294,292
Washington	56,654	218,291	35,868	107,602	361,761
West Virginia	91,340	361,713	60,761	182,284	604,758
Wisconsin	162,247	814,720	137,449	412,348	1,364,517
Wyoming	30,000	136,875	22,796	68,387	2,280,058
U.S. service schools					
Canal Zone					
Guam		[1] 40,938	6,755	20,263	67,956
Puerto Rico		[1] 479,963	71,064	213,191	764,218
Virgin Islands		[1] 20,938	3,364	10,132	34,434

[1] Includes $40,000 (Guam), $52,500 (Puerto Rico), and $20,000 (Virgin Islands), obligated under supplemental acts.

	Vocational Act of 1963			Appalachian Act	
	Total	Section 3	Section 13	Section 211	Section 214
Total	$188,902,782	$179,673,772	$9,229,010	$4,997,357	$3,831,780
Alabama	1,945,559	1,844,927	100,632	396,330	
Alaska	260,219	245,236	14,983		
Arizona	1,888,622	1,805,218	83,404		
Arkansas	2,628,480	2,519,605	108,875		
California	15,567,602	14,665,140	902,462		
Colorado	2,046,444	1,946,059	100,385		
Connecticut	2,304,045	2,171,198	132,847		
Delaware	414,770	390,298	24,472		
District of Columbia	473,449	449,678	23,771		
Florida	6,471,796	6,199,468	272,328		
Georgia	6,058,803	5,810,089	248,714	465,000	175,000
Hawaii	350,475	339,203	11,272		
Idaho	930,451	890,996	39,455		
Illinois	8,713,822	8,216,394	497,428		
Indiana	5,154,611	4,907,895	246,716		
Iowa	1,247,749	1,177,462	70,287		
Kansas	1,013,175	956,375	56,800		
Kentucky	1,770,590	1,680,332	90,258	886,353	1,035,000
Louisiana	4,734,017	4,537,243	196,774		
Maine	1,213,505	1,189,505	24,000		
Maryland	3,384,284	3,202,493	181,791		
Massachusetts	4,604,568	4,351,359	253,209		
Michigan	8,278,471	7,856,956	421,515		
Minnesota	1,564,160	1,474,680	89,480		
Mississippi	3,271,619	3,132,779	138,840		
Missouri	4,489,823	4,274,571	215,252		
Montana	342,283	323,349	18,934		
Nebraska	1,581,897	1,508,981	72,916		
Nevada	357,704	337,727	19,977		
New Hampshire	755,821	722,359	33,462		
New Jersey	5,658,707	5,340,073	318,634		
New Mexico	1,361,392	1,302,460	58,932		
New York	14,457,917	13,630,868	827,049	672,420	688,300
North Carolina	6,999,567	6,711,898	287,669	419,440	282,260
North Dakota	831,228	794,770	36,458		
Ohio	10,304,145	9,793,732	510,413	541,780	657,220
Oklahoma	3,133,377	3,005,524	127,853		
Oregon	2,066,869	1,965,985	100,884		
Pennsylvania	11,744,575	11,185,718	558,857	358,034	
Rhode Island	932,122	888,672	43,450		
South Carolina	3,772,765	3,614,447	158,318	455,000	262,000
South Dakota	858,066	833,066	[illegible]000		
Tennessee	2,111,197	2,005,637	10[illegible],560	383,000	405,000
Texas	13,154,522	12,595,165	559,357		
Utah	1,255,534	1,200,597	54,937		
Vermont	503,627	482,651	20,976		
Virginia	5,749,940	5,507,219	242,721	170,000	225,000
Washington	1,290,362	1,209,960	80,402		
West Virginia	2,509,789	2,403,411	106,378	250,000	102,000
Wisconsin	4,380,908	4,173,147	207,761		
Wyoming	358,679	340,700	17,979		
U.S. service schools					
Canal Zone					
Guam	38,087	35,986	2,101		
Puerto Rico	1,587,188	1,502,377	84,811		
Virgin Islands	23,405	22,134	1,271		

TOTAL ENROLLMENT IN VOCATIONAL CLASSES, FISCAL YEAR 1966—TENTATIVE DATA

	Total	Agriculture	Distribution	Health	Home	Office economics	Technical	Trades and industry	Other n.e.c.
Total	6,216,679	907,368	420,193	83,552	2,032,216	1,237,086	257,973	1,226,969	51,32
Alabama	124,090	40,864	2,156	3,086	39,252	6,940	2,683	29,109	
Alaska	6,501	55	357	20	2,402	1,636	75	1,956	
Arizona	45,116	3,537	5,341	386	23,220	2,201	2,662	7,769	
Arkansas	92,724	29,363	2,994	722	42,159	2,796		14,690	
California	746,054	21,171	117,492	10,147	140,500	237,658	55,26[illegible]	163,819	
Colorado	73,255	3,692	7,996	1,050	27,438	12,696	2,880	17,503	
Connecticut	56,502	1,206	1,734	726	111,148	7,270	18,400	16,018	
Delaware	18,622	820	474	210	10,048	2,195	465	4,410	
District of Columbia	9,368	35	817	555	2,897	1,237	104	3,723	
Florida	277,275	16,185	24,450	5,724	110,441	59,979	16,226	44,270	
Georgia	192,715	59,463	10,233	1,464	73,771	7,868	5,153	34,763	
Hawaii	16,525	1,976	541	120	7,736	1,225	240	4,687	
Idaho	21,761	4,415	858	462	9,703	2,401	594	3,328	
Illinois	153,392	24,997	3,436	1,790	55,726	21,262	7,363	36,156	2,662
Indiana	78,506	17,852	2,465	934	39,603	205	3,653	13,794	
Iowa	90,972	28,103	3,167	456	39,336	1,171	3,425	15,314	
Kansas	52,971	7,144	6,800	1,148	15,689	3,749	2,502	15,939	
Kentucky	93,365	19,263	4,007	751	37,371	8,625	1,071	22,277	
Louisiana	110,117	12,057	3,134	1,898	35,002	33,752	3,922	20,352	
Maine	10,026	1,104	449	124	3,880	13	147	4,309	
Maryland	133,084	4,899	2,332	169	16,260	88,959	4,277	16,188	
Massachusetts	143,156	1,229	2,555	1,136	43,392	66,945	2,276	25,623	
Michigan	265,332	15,193	35,406	4,108	76,112	56,532	8,232	69,839	
Minnesota	183,719	25,692	6,990	865	99,851	19,157	5,240	25,924	
Mississippi	98,652	36,709	2,651	824	39,567	1,748	3,673	13,480	
Missouri	90,026	13,879	7,345	1,771	41,205	10,832	2,492	12 502	
Montana	14,390	3,200	424	161	5,234	325	1,176	3,870	
Nebraska	50,358	8,006	6,150	996	20,601	4,028	613	9,883	81
Nevada	14,827	640	216	273	6,144	2,271	2,670	2,613	
New Hampshire	8,735	537	56	61	6,183		595	1,303	
New Jersey	80,192	2,543	2,578	1,717	4,786	36,397	8,487	23,684	
New Mexico	20,667	2,477	1,188	137	9,273	4,473	500	2,619	
New York	496,434	13,006	17,544	10,275	79,033	262,912	21,056	992,608	
North Carolina	242,638	65,542	8,214	2,385	74,606	8,873	4,294	65,102	13,622
North Dakota	21,389	4,456	313	389	11,513	1,766	601	2,351	
Ohio	226,508	24,171	8,540	3,572	104,319	16,386	3,492	66,028	

·TOTAL ENROLLMENT IN VOCATIONAL CLASSES, FISCAL YEAR 1966—TENTATIVE DATA—Continued

	Total	Agriculture	Distribution	Health	Home	Office economics	Technical	Trades and	Other n.e.c. industry
Oklahoma	78,603	24,355	1,434	1,370	36,779	1,352	4,186	9,127	------------
Oregon	50,098	7,423	1,895	788	15,676	11,375	1,311	11,630	------------
Pennsylvania	197,018	13,524	7,145	3,900	44,757	71,850	8,403	47,439	------------
Rhode Island	8,041	640	80	87	4,304	------------	368	2,562	------------
South Carolina	127,004	42,231	5,777	787	55,499	8,348	3,564	10,798	------------
South Dakota	16,696	5,488	293	127	6,695	1,230	159	2,704	------------
Tennessee	118,424	22,877	6,495	2,365	56,456	2,318	1,759	26,154	------------
Texas	503,531	196,705	38,205	4,542	186,328	4,590	20,014	53,147	------------
Utah	50,285	4,482	3,406	445	14,523	16,772	1,519	9,138	------------
Vermont	15,201	774	322	174	9,685	375	704	3,167	------------
Virginia	192,622	24,181	30,145	2,021	70,539	38,224	2,312	25,200	------------
Washington	163,764	10,218	7,597	2,613	58,648	27,687	10,899	46,102	------------
West Virginia	49,309	5,759	1,479	422	17,146	13,580	956	9,967	------------
Wisconsin	179,442	24,104	6,592	2,544	35,905	28,026	4,701	42,613	34,957
Wyoming	8,308	1,832	268	21	4,119	518	39	1,511	------------
Guam	682	149	------------	------------	------------	------------	------------	533	------------
Puerto Rico	95,659	7,102	7,597	801	48,838	13,654	557	17,110	------------
Virgin Islands	2,028	43	60	23	918	704	16	264	------------

ENROLLMENT IN SECONDARY VOCATIONAL EDUCATION CLASSES, BY OCCUPATION AND BY STATE, FISCAL YEAR 1964

	Total	Agriculture	Distribution	Health	Home economics	Technical	Trades and industries
Total	2,140,756	501,819	55,132	5,478	1,308,453	20,755	249,119
Alabama	58,607	22,067	774	----------	30,601	191	4,974
Alaska	1,322	26	125	----------	810	----------	361
Arizona	18,677	2,436	558	----------	13,504	193	1,986
Arkansas	51,906	19,794	546	----------	30,053	16	1,497
California	85,847	14,846	1,262	----------	64,747	461	4,531
Colorado	13,411	2,436	861	----------	9,005	----------	1,109
Connecticut	12,148	622	585	----------	5,013	1,099	4,829
Delaware	6,457	670	220	47	4,138	110	1,272
District of Columbia	3,091	----------	37	----------	1,170	----------	1,884
Florida	90,988	14,256	906	44	67,484	616	7,682
Georgia	94,268	26,479	1,027	----------	61,539	----------	5,223
Hawaii	8,844	1,387	235	----------	7,222	----------	----------
Idaho	11,988	4,097	126	----------	7,551	----------	214
Illinois	75,246	16,141	2,184	2	41,888	141	14,890
Indiana	51,570	11,056	441	----------	35,654	63	4,356
Iowa	30,165	10,850	600	----------	16,484	278	1,953
Kansas	19,281	6,588	358	----------	10,521	171	1,643
Kentucky	49,058	14,071	754	----------	30,636	145	3,452
Louisiana	67,703	16,099	785	----------	42,704	1,414	6,701
Maine	5,522	1,104	14	----------	3,868	20	516
Maryland	16,836	3,721	225	77	4,757	920	7,136
Massachusetts	19,876	1,283	1,653	----------	2,077	429	14,434
Michigan	71,406	13,032	3,695	405	47,254	387	6,633
Minnesota	42,159	14,552	629	34	25,674	----------	1,270
Mississippi	61,637	19,846	504	30	37,770	221	3,266
Missouri	44,866	12,288	1,673	33	25,593	725	4,554
Montana	7,061	2,301	320	----------	3,869	141	430
Nebraska	14,309	4,919	272	----------	8,564	116	438
Nevada	5,053	442	171	----------	3,488	461	491
New Hampshire	4,055	371	38	----------	3,216	----------	430
New Jersey	13,113	931	664	818	3,223	933	6,544
New Mexico	10,318	2,409	628	----------	6,539	----------	742
New York	230,412	8,858	9,294	2,671	158,322	5,464	45,803
North Carolina	108,353	39,639	2,721	----------	61,314	81	4,598
North Dakota	9,610	2,866	121	----------	6,550	----------	73
Ohio	54,091	13,381	1,898	360	31,091	373	6,988
Oklahoma	51,570	17,859	1,164	----------	26,151	678	5,718
Oregon	12,736	4,817	810	----------	6,951	----------	158
Pennsylvania	52,847	9,717	1,376	341	20,866	2,837	17,710
Rhode Island	8,783	491	73	----------	6,419	85	1,715
South Carolina	48,937	16,027	1,285	----------	24,841	175	6,609
South Dakota	10,169	3,292	150	----------	6,309	----------	418
Tennessee	78,596	21,098	863	----------	46,701	508	9,426
Texas	175,286	47,963	6,584	----------	104,162	894	15,683
Utah	10,345	3,344	257	34	6,109	7	594
Vermont	4,900	674	74	----------	3,176	106	870
Virginia	66,484	13,167	3,366	190	43,267	60	6,434
Washington	42,403	8,521	1,108	----------	31,928	----------	846
West Virginia	20,441	5,395	227	----------	11,167	236	3,416
Wisconsin	34,262	16,542	----------	----------	17,720	----------	----------
Wyoming	4,756	1,577	156	----------	2,883	----------	140
American Samoa	----------	----------	----------	----------	----------	----------	----------
Guam	732	223	----------	----------	327	----------	182
Puerto Rico	47,282	5,161	724	392	34,955	----------	6,050
Virgin Islands	973	87	11	----------	628	----------	247

ENROLLMENT IN SECONDARY VOCATIONAL EDUCATION CLASSES, FISCAL YEAR 1965—TENTATIVE DATA

	Total	Agriculture	Distribution	Health	Home economics	Office	Technical	Trades and industry
Total	2,819,250	516,893	76,186	8,744	1,442,807	498,034	23,877	252,709
Alabama	64,737	23,200	931	675	33,198	394	73	6,266
Alaska	1,819	42	290	----------	1,273	----------	19	195
Arizona	20,571	2,427	886	----------	15,278	49	40	1,891
Arkansas	51,465	19,791	760	----------	27,369	----------	61	1,484
California	124,969	16,676	2,680	906	73,581	22,936	838	7,352
Colorado	16,884	2,410	1,415	----------	9,459	2,420	----------	1,180
Connecticut	16,764	651	1,287	----------	7,632	163	1,237	5,794
Delaware	6,920	695	437	64	4,263	----------	155	1,306
District of Columbia	3,857	----------	116	----------	1,314	652	----------	1,775
Florida	129,659	15,087	2,126	68	100,323	2,278	638	9,139
Georgia	95,785	26,000	1,274	----------	62,175	1,950	----------	4,386
Hawaii	9,372	1,603	242	----------	7,430	97	----------	----------
Idaho	14,750	4,038	405	----------	9,018	570	----------	719
Illinois	80,993	16,450	2,414	15	43,418	9,918	79	8,699
Indiana	52,473	11,473	513	37	36,083	----------	130	4,237
Iowa	38,767	10,499	696	----------	25,426	165	243	1,738
Kansas	20,151	5,686	872	----------	10,042	1,298	255	1,998
Kentucky	51,125	14,250	980	----------	31,796	81	227	3,791
Louisiana	63,286	17,488	1,121	----------	44,493	----------	----------	184
Maine	17,850	965	57	----------	15,857	----------	22	949
Maryland	95,726	3,547	1,106	66	5,188	75,540	1,382	8,897
Massachusetts	18,379	1,125	539	----------	1,995	----------	548	14,172
Michigan	104,373	13,130	5,092	532	72,160	5,432	340	7,687
Minnesota	104,956	14,910	1,524	51	77,638	9,573	3	1,257
Mississippi	62,986	18,670	634	30	40,188	----------	235	3,229
Missouri	56,563	12,758	2,056	53	35,866	----------	1,091	4,739
Montana	7,568	2,375	329	----------	4,162	----------	321	381
Nebraska	14,633	4,963	318	----------	8,752	----------	111	489
Nevada	6,214	523	267	----------	4,286	210	431	497
New Hampshire	5,163	371	40	----------	4,055	----------	----------	697
New Jersey	45,558	1,301	1,486	75	3,804	31,243	2,065	5,584
New Mexico	16,596	2,368	825	11	8,221	4,424	----------	747
New York	309,891	8,972	11,742	4,793	45,027	192,390	7,077	39,890
North Carolina	125,316	43,632	4,240	----------	65,433	----------	12	11,999
North Dakota	9,850	2,908	111	----------	6,831	----------	----------	----------
Ohio	78,233	13,800	2,387	400	52,719	980	68	7,879
Oklahoma	50,798	16,194	1,371	----------	25,687	----------	878	6,668
Oregon	23,691	5,314	1,252	45	7,634	8,537	----------	909
Pennsylvania	114,376	9,714	1,519	123	22,257	60,800	3,200	16,763
Rhode Island	5,305	624	72	----------	2,964	----------	68	1,577
South Carolina	60,941	16,510	1,781	----------	28,407	7,014	273	6,956
South Dakota	10,551	3,322	227	----------	6,437	----------	----------	565
Tennessee	77,848	22,020	1,062	----------	44,516	----------	493	9,757
Texas	180,530	48,646	8,130	----------	105,335	616	626	17,177
Utah	28,976	3,298	315	----------	9,086	14,831	11	1,435
Vermont	14,964	650	89	----------	13,052	----------	106	1,067
Virginia	127,243	17,079	5,483	439	66,722	30,530	112	6,878
Washington	47,209	8,643	1,451	96	34,490	1,478	----------	1,051
West Virginia	22,512	5,389	263	----------	11,777	861	394	3,828
Wisconsin	35,487	17,899	----------	----------	17,588	----------	----------	----------
Wyoming	4,941	1,644	167	----------	2,924	----------	----------	206
U.S. service schools	----------	----------	----------	----------	----------	----------	----------	----------
Canal Zone	----------	----------	----------	----------	----------	----------	----------	----------
Guam	1,044	123	----------	----------	600	----------	----------	321
Puerto Rico	59,228	4,977	806	226	36,560	10,604	----------	6,055
Virgin Islands	9,404	63	----------	39	9,018	----------	15	269

ENROLLMENT IN SECONDARY VOCATIONAL EDUCATION CLASSES, FISCAL YEAR 1966—TENTATIVE DATA

	Total	Agriculture	Distribution	Health	Home economics	Office	Technical	Trades and industry
Total	3,169,709	514,354	101,580	9,730	1,395,430	798,433	28,853	306,413
Alabama	74,351	24,356	1,284	677	35,325	5,245	206	7,258
Alaska	3,811	55	239	....	1,817	1,262	18	420
Arizona	27,341	3,159	1,775	....	18,987	1,399	....	2,021
Arkansas	48,566	19,431	747	....	26,821	128	....	1,439
California	223,591	19,353	3,302	636	78,367	101,740	3,517	16,676
Colorado	20,816	2,724	1,560	....	11,516	3,055	....	1,961
Connecticut	24,646	879	1,669	63	8,092	6,514	1,089	6,340
Delaware	15,370	595	474	115	10,048	2,195	231	1,712
District of Columbia	4,180	35	93	....	1,240	1,025	....	1,787
Florida	110,240	14,640	2,410	47	77,444	5,337	678	9,684
Georgia	91,876	26,159	1,571	....	55,830	4,158	....	4,158
Hawaii	8,391	1,466	247	....	6,589	89	....	....
Idaho	15,990	4,036	634	....	8,939	1,738	....	643
Illinois	98,841	16,385	2,306	21	43,240	19,823	....	17,066
Indiana	53,009	11,384	704	58	36,231	60	205	4,367
Iowa	46,778	10,503	808	....	32,684	366	276	2,141
Kansas	20,971	5,925	926	7	10,455	952	332	2,374
Kentucky	59,164	14,217	1,091	....	31,176	8,285	243	4,152
Louisiana	68,872	10,062	1,201	....	33,166	22,939	124	1,380
Maine	5,934	955	73	....	3,858	....	27	1,021
Maryland	106,203	4,086	1,221	82	5,855	83,215	1,768	9,976
Massachusetts	84,913	1,162	592	....	2,160	65,432	546	15,021
Michigan	138,380	13,237	13,949	673	59,436	39,357	298	11,430
Minnesota	110,926	14,516	2,073	36	81,219	11,569	13	1,500
Mississippi	56,107	18,273	659	54	33,399	70	46	3,606
Missouri	64,514	13,832	2,429	66	34,159	7,283	1,145	5,600
Montana	8,462	2,485	358	....	3,998	120	467	1,034
Nebraska	21,937	5,149	717	....	9,684	2,616	....	3,771
Nevada	7,816	551	62	....	5,076	929	635	563
New Hampshire	6,479	356	56	....	5,407	....	....	660
New Jersey	52,536	1,526	2,245	330	3,382	35,272	1,124	8,657
New Mexico	16,149	2,441	731	15	8,893	3,077	....	992
New York	315,162	8,714	12,673	5,164	50,211	189,807	7,390	41,203
North Carolina	130,603	42,473	7,249	....	63,288	378	....	17,215
North Dakota	11,505	3,084	266	....	7,490	595	....	70
Ohio	88,974	13,311	3,489	550	56,830	5,003	469	9,322
Oklahoma	55,103	17,868	1,421	72	26,744	763	1,210	7,025
Oregon	24,739	6,289	1,404	41	7,408	8,467	....	1,130
Pennsylvania	123,841	9,672	1,815	170	27,272	62,400	4,067	18,445
Rhode Island	4,893	537	80	....	3,037	....	115	1,124
South Carolina	62,889	16,330	2,121	....	28,382	8,202	292	7,562
South Dakota	10,275	2,987	293	....	6,600	35	81	279
Tennessee	78,244	20,905	1,241	....	44,902	979	391	9,826
Texas	190,845	49,214	8,947	....	111,412	1,378	1,153	18,741
Utah	29,305	3,504	731	....	7,716	14,992	4	2,358
Vermont	11,454	614	322	....	9,053	....	119	1,346
Virginia	132,728	16,861	7,617	409	67,314	33,201	157	7,169
Washington	58,602	8,715	2,075	35	36,796	9,300	33	1,648
West Virginia	34,023	5,072	248	17	11,477	12,974	368	3,867
Wisconsin	36,072	17,463	81	....	15,680	2,074	....	774
Wyoming	5,831	1,608	263	....	3,323	250	....	387
Guam	273	149	....	....	....	....	....	124
Puerto Rico	50,354	5,008	978	381	25,182	11,681	....	7,124
Virgin Islands	1,918	43	60	11	820	704	16	264
Other [1]	14,916	....	....	....	....	....	....	....

[1] Not broken down by program.

ENROLLMENT IN POSTSECONDARY VOCATIONAL EDUCATION CLASSES BY OCCUPATION AND BY STATE, FISCAL YEAR 1964

	Total	Agriculture	Distribution	Health	Economics	Technical	Trades and industries
Total	264,402	92,907	2,688	41,698	1,562	71,824	53,633
Alabama	7,431	2,232	----------	526	----------	1,034	3,639
Alaska	----------	----------	----------	----------	----------	----------	----------
Arizona	263	----------	----------	161	----------	102	----------
Arkansas	802	----------	----------	672	----------	130	----------
California	38,296	583	1,260	7,416	----------	25,536	3,501
Colorado	4,130	59	----------	472	----------	1,897	1,702
Connecticut	2,399	29	----------	312	----------	2,058	----------
Delaware	27	----------	----------	25	----------	2	----------
District of Columbia	426	----------	----------	299	----------	127	----------
Florida	12,782	367	284	1,716	288	5,235	4,892
Georgia	5,485	1,234	9	789	----------	1,244	2,209
Hawaii	2,004	521	----------	131	----------	80	1,272
Idaho	1,022	----------	----------	319	----------	317	385
Illinois	4,296	874	----------	1,696	----------	1,726	----------
Indiana	1,842	1,337	----------	392	----------	113	----------
Iowa	1,740	807	20	287	----------	614	12
Kansas	3,104	545	74	1,232	----------	794	459
Kentucky	4,738	1,946	----------	564	----------	187	2,041
Louisiana	2,633	1,087	----------	774	----------	772	----------
Maine	482	----------	----------	104	----------	88	290
Maryland	614	----------	----------	53	----------	561	----------
Massachusetts	1,131	----------	18	801	----------	312	----------
Michigan	5,795	702	340	2,082	----------	2,671	----------
Minnesota	5,790	1,500	32	657	----------	722	2,879
Mississippi	1,231	112	----------	652	----------	467	----------
Missouri	1,906	791	----------	949	----------	166	----------
Montana	293	21	18	59	----------	99	96
Nebraska	1,701	766	----------	298	----------	476	161
Nevada	1,688	----------	----------	186	----------	1,502	----------
New Hampshire	281	158	----------	123	----------	----------	----------
New Jersey	869	83	9	224	----------	472	81
New Mexico	313	----------	----------	101	----------	212	----------
New York	2,280	1,476	----------	804	----------	----------	----------
North Carolina	24,694	7,701	----------	1,662	----------	2,037	13,294
North Dakota	1,695	177	58	319	----------	561	580
Ohio	5,459	3,027	45	1,541	----------	846	----------
Oklahoma	4,449	2,162	----------	506	----------	1,781	----------
Oregon	1,654	37	7	454	----------	1,109	47
Pennsylvania	6,185	2,285	----------	2,763	----------	240	897
Rhode Island	100	----------	----------	100	----------	----------	----------
South Carolina	9,121	7,878	----------	512	----------	731	----------
South Dakota	146	----------	----------	134	----------	12	----------
Tennessee	2,074	271	----------	1,491	----------	312	----------
Texas	59,192	46,620	127	3,331	1,364	6,871	879
Utah	3,143	354	----------	232	----------	1,377	1,180
Vermont	409	160	----------	55	----------	194	----------
Virginia	5,566	2,390	77	850	----------	914	1.335
Washington	8,776	----------	277	1,399	----------	2,298	4,802
West Virginia	666	351	----------	315	----------	----------	----------
Wisconsin	12,121	1,558	----------	1,129	----------	2,565	6,869
Wyoming	83	----------	13	16	----------	26	28
American Samoa	----------	----------	----------	----------	----------	----------	----------
Guam	----------	----------	----------	----------	----------	----------	----------
Puerto Rico	1,062	706	20	----------	----------	234	102
Virgin Islands	13	----------	----------	13	----------	----------	----------

ENROLLMENT IN POSTSECONDARY VOCATIONAL EDUCATIONAL CLASSES, FISCAL YEAR 1965—TENTATIVE DATA

	Total	Agriculture	Distribution	Health	Home economics	Office	Technical	Trades and industry
Total	207,201	2,054	6,384	21,303	2,060	43,633	71,845	59,922
Alabama	2,880					341	907	1,632
Alaska	924						83	841
Arizona	1,147	135	19	197			471	325
Arkansas	2,213	5		755		557	296	600
California	64,980	957	2,252	4,459	234	8,554	27,938	20,586
Colorado	4,819	107		350		1,601	795	1,966
Connecticut	2,031		27	522			1,290	192
Delaware	14							14
District of Columbia	1,140			317	111	150	18	544
Florida	10,875	120	1,422		336	4,928	4,069	
Georgia	2,755		27			2,728		
Hawaii	2,769			153		1,078	106	1,432
Idaho	853		15	14		90	344	390
Illinois	1,726			30			1,635	61
Indiana	199		5				194	
Iowa	1,145		55	358			732	
Kansas	2,429		326	147		411	852	693
Kentucky								
Louisiana	9,258			1,027		4,678	1,115	2,438
Maine	636			99			92	445
Maryland	1,013					252	748	13
Massachusetts	1,479	96	23	822			418	120
Michigan	8,252	227	344	1,595		372	2,440	3,274
Minnesota	4,666	28	24	584		645	503	2,882
Mississippi	1,665	13	18	549			558	527
Missouri	254				3		251	
Montana	199		32				89	78
Nebraska	1,021			331			532	158
Nevada	659			144			515	
New Hampshire	645	154		112				379
New Jersey	781	56	16	83		16	517	93
New Mexico	471			93		141	237	
New York								
North Carolina	1,306	30	18	25		32	369	605
North Dakota	1,749		45	391			10	703
Ohio	3,349	54	72	2,214		37	972	
Oklahoma	2,066						2,066	
Oregon	4,027	34	76	418		964	1,475	1,060
Pennsylvania	2,751		27	32		1,400	338	954
Rhode Island								
South Carolina	1,194						1,194	
South Dakota	438			143			80	215
Tennessee	1,659						241	1,418
Texas	12,336		173	1,442	1,371	24	8,640	686
Utah	2,591	13		199		199	913	1,267
Vermont	287			94			193	
Virginia	3,729		79	989		300	1,019	1,342
Washington	14,075		367	1,450		4,497	2,612	5,149
West Virginia	124	9		9			106	
Wisconsin	20,818	16	883	908	5	9,336	2,968	6,702
Wyoming	70			21			20	29
U.S. service schools								
Canal Zone								
Guam								
Puerto Rico	734		39			302	284	109
Virgin Islands								

ENROLLMENT IN POST-SECONDARY VOCATIONAL EDUCATION CLASSES, FISCAL YEAR 1966—TENTATIVE DATA

	Total	Agriculture	Distribution	Health	Home economics	Office	Technical	Trades and industry
Total	442,451	5,914	15,717	34,029	2,188	165,486	104,421	108,183
Alabama	2,345		70			956	1,201	118
Alaska	23						23	
Arizona	2,891	209	93	336	275	614	771	593
Arkansas	3,127	12		722		1,226		1,167
California	154,707	1,429	6,567	6,120		87,801	17,053	35,737
Colorado	7,438	177	134	371	3	3,207	1,190	2,356
Connecticut	3,050		65	559		534	1,661	231
Delaware								
District of Columbia	1,129			498		189	18	424
Florida	22,296	121	2,019	1,963	552	6,705	10,936	
Georgia	3,779		69			3,710		
Hawaii	2,442			120		1,057	112	1,153
Idaho	962	23	7	15		82	358	477
Illinois	3,673	248		30	351	306	2,500	238
Indiana	762		16	70		145	527	4
Iowa	1,815	36	150	406		46	954	223
Kansas	2,555		149	159		492	838	917
Kentucky	1,823			685			269	869
Louisiana	12,800		25	797		5,108	1,758	5,112
Maine	803			124		13	50	616
Maryland	2,238					272	1,945	21
Massachusetts	3,619			1,010		1,513	1,096	
Michigan	19,472	427	1,341	2,599	62	11,766	3,051	226
Minnesota	5,079	56	17	709		1,048	516	2,733
Mississippi	2,646	41	170	487			1,022	926
Missouri	1,730			138	6	966	424	196
Montana	1,249	60	66	98		189	377	459
Nebraska	1,395	64	15	388		152	613	163
Nevada	291	24		183			84	
New Hampshire	853	181		61			256	355
New Jersey	1,160		18	315		27	626	174
New Mexico	639			91		209	339	
New York	29,749	1,845	1,625	4,526	610	10,676	10,179	288
North Carolina	7,266	286	18	946	12	1,958	2,261	1,785
North Dakota	2,524		47	389		685	601	802
Ohio	3,708	88	201	2,325		67	1,027	
Oklahoma	2,074						2,074	
Oregon	4,617	72	75	436		1,472	1,225	1,337
Pennsylvania	3,300		12	3		2,350	322	613
Rhode Island								
South Carolina	3,224	284	16				2,924	
South Dakota	391			127			78	186
Tennessee	3,056					791	363	1,902
Texas	19,494		204	1,900		2,462	14,039	889
Utah	2,516		21	239		292	1,075	889
Vermont	386			139			234	13
Virginia	4,932		100	1,097		576	1,460	1,699
Washington	55,853	60	804	1,601	63	6,240	10,580	36,505
West Virginia	247						247	
Wisconsin	21,955	91	1,506	975	254	8,832	4,701	5,596
Wyoming	319		5	21		209	39	45
Guam	21							21
Puerto Rico	1,515	80	92	251		543	424	125
Virgin Islands								
Other[1]	6,513							

[1] Not broken down by program.

ENROLLMENT IN ADULT VOCATIONAL EDUCATION CLASSES BY OCCUPATION AND BY STATE, FISCAL YEAR 1964

	Total	Agriculture	Distribution	Health	Home economics	Technical	Trade and industry
Totals	2,161,232	265,879	276,306	11,830	712,033	128,662	766,522
Alabama	63,913	16,084	428	87	29,701	939	16,674
Alaska	1,345	----	----	12	337	20	976
Arizona	13,409	84	2,422	52	3,590	1,307	5,954
Arkansas	40,768	9,985	3,196	----	16,476	581	10,530
California	375,374	----	99,711	2,429	98,720	44,369	130,145
Colorado	37,041	758	5,986	20	13,883	1,227	15,167
Connecticut	18,594	278	24	270	709	4,676	12,637
Delaware	4,523	149	1,028	39	122	275	2,910
District of Columbia	4,492	----	472	263	2,228	----	1,529
Florida	83,180	1,161	18,988	551	28,155	7,214	27,111
Georgia	68,366	11,419	6,552	331	22,917	597	26,550
Hawaii	7,441	----	2,173	16	1,530	430	3,292
Idaho	3,482	375	180	162	529	166	2,070
Illinois	46,357	9,648	1,929	41	16,387	2,663	15,689
Indiana	21,739	4,945	2,488	55	3,770	1,527	8,954
Iowa	34,080	15,203	1,613	206	4,938	1,443	10,677
Kansas	23,002	393	5,236	231	5,206	814	11,122
Kentucky	28,032	4,481	1,795	103	6,762	382	14,509
Louisiana	21,618	3,212	2,144	341	2,678	1,745	11,498
Maine	2,765	143	243	----	----	43	2,336
Maryland	20,411	620	1,589	----	12,650	120	5,432
Massachusetts	50,984	405	1,222	151	37,577	907	10,722
Michigan	83,195	2,351	16,850	494	15,949	3,907	43,644
Minnesota	60,334	12,484	5,713	232	18,722	4,379	18,804
Mississippi	35,699	23,468	1,901	----	2,699	2,091	5,540
Missouri	23,127	3,413	5,204	336	6,746	1,223	6,205
Montana	4,423	818	179	172	775	221	2,258
Nebraska	15,710	1,072	1,326	97	8,098	14	5,103
Nevada	3,289	75	648	24	699	370	1,473
New Hampshire	3,556	----	281	53	667	806	1,749
New Jersey	23,490	491	336	397	1,422	6,492	14,352
New Mexico	3,372	15	246	----	343	615	2,153
New York	99,192	----	2,655	447	34,599	3,557	57,934
North Carolina	54,635	16,681	----	357	12,771	3,737	21,089
North Dakota	8,934	1,683	507	----	2,809	----	3,935
Ohio	110,238	5,710	6,725	511	44,664	----	52,628
Oklahoma	17,842	5,598	93	629	5,466	1,524	4,532
Oregon	19,478	725	451	287	9,542	38	8,435
Pennsylvania	50,260	1,456	3,948	343	19,901	3,357	21,255
Rhode Island	2,917	50	----	57	1,296	121	1,393
South Carolina	55,442	18,307	2,099	64	27,733	620	6,619
South Dakota	6,171	2,767	793	----	434	69	2,108
Tennessee	20,911	2,712	3,192	47	4,679	928	9,353
Texas	206,633	69,042	25,899	468	72,923	5,853	32,448
Utah	14,211	614	980	107	7,198	564	4,748
Vermont	2,693	148	86	84	707	347	1,321
Virginia	42,706	6,652	16,853	294	3,482	1,330	14,095
Washington	71,058	1,086	4,376	892	20,748	8,532	35,424
West Virginia	12,816	652	796	----	4,746	237	6,385
Wisconsin	106,559	5,150	7,804	50	60,895	6,199	26,461
Wyoming	3,125	266	50	----	921	9	1,879
American Samoa	----	----	----	----	----	----	----
Guam	450	----	----	----	----	----	450
Puerto Rico	27,837	3,050	6,896	28	11,534	77	6,252
Virgin Islands	13	----	----	----	----	----	13

ENROLLMENT IN ADULT VOCATIONAL EDUCATION CLASSES, FISCAL 1965—TENTATIVE DATA

	Total	Agriculture	Distribution	Health	Home economics	Office	Technical	Trades and industry
Total	2,378,522	367,287	250,222	36,517	650,211	187,468	130,015	756,802
Alabama	39,463	16,274	623	1,472	5,657	310	789	14,338
Alaska	315		40	20	255			
Arizona	16,086	106	2,572	74	6,088		1,524	5,722
Arkansas	44,208	9,200	3,557	12	19,548	610	501	10,780
California	261,722		52,845	2,805	47,797	5,375	38,488	115,012
Colorado	37,887	839	6,065	706	14,795	2,112	844	12,526
Connecticut	14,923	473	141	215	1,696		6,724	5,674
Delaware	2,298	212		177	321		253	1,335
District of Columbia	5,121		1,214	354	1,960		104	1,489
Florida	136,418	1,480	17,195	2,965	32,891	45,160	6,618	30,109
Georgia	95,339	31,455	8,010	1,614	20,759	3,199	2,472	27,830
Hawaii	5,388	1,064	101		1,380	105	214	2,524
Idaho	3,898	339	262	424	705	431	400	1,337
Illinois	60,215	9,891	1,642	1,589	16,137	7,757	4,566	18,633
Indiana	26,449	6,384	5,640	650	3,778		2,188	7,809
Iowa	36,681	15,215	1,917	122	6,302	113	1,694	11,318
Kansas	26,011	1,039	5,367	1,168	5,308	570	1,053	11,506
Kentucky	29,827	3,736	1,681	733	6,269	248	668	16,492
Louisiana	31,197	3,910	2,233	46	2,497	3,164	4,012	15,335
Maine	3,305	153	548		289		8	2,307
Maryland	21,203	605	1,051	85	9,457	5,013	277	4,715
Massachusetts	52,104	181	1,384	143	39,435		729	10,232
Michigan	84,108	1,943	16,922	633	17,624		3,917	43,069
Minnesota	68,857	12,955	4,824	304	20,619	4,624	4,741	20,790
Mississippi	35,811	20,437	2,544	134	3,920		2,670	6,106
Missouri	24,658	4,231	4,286	1,474	7,631		1,104	5,932
Montana	4,663	905	28	132	907		347	2,344
Nebraska	20,059	3,719	1,305	19	9,855			5,161
Nevada	4,834	42	227	88	863	81	1,761	1,772
New Hampshire	1,514			30	834		244	406
New Jersey	19,588	605	336	1,035	1,586	386	5,174	10,466
New Mexico	2,566	36	742		658	33	158	939
New York	151,222	1,955	2,292	1,288	26,189	60,757	6,097	52,644
North Carolina	73,305	20,254	1,932	1,800	11,705	2,071	4,372	31,171
North Dakota	7,271	2,223	185		3,889			974
Ohio	127,813	8,533	8,575	654	51,092	3,599		55,360
Oklahoma	21,659	7,272	244	1,181	5,313		906	6,743
Oregon	17,087	774	521	129	8,297	1,133	80	6,153
Pennsylvania	66,318	4,185	7,512	3,459	22,795	6,600	3,462	18,305
Rhode Island	3,007	87		93	1,400		149	1,278
South Carolina	64,367	26,524	3,615	663	27,491		278	5,796
South Dakota	6,309	2,501	837	8	381		134	2,448
Tennessee	27,771	1,328	4,007	2,009	9,235		1,191	10,001
Texas	272,341	123,873	28,041	2,634	78,712	141	5,577	33,363
Utah	19,070	980	1,964	223	9,042	1,326	474	5,061
Vermont	2,900	263		120	681	30	369	1,437
Virginia	58,094	7,857	25,020	412	4,178	2,985	789	16,853
Washington	82,591	1,456	6,786	789	22,891	9,805	6,987	33,877
West Virginia	14,485	984	884	561	5,776		259	6,021
Wisconsin	114,102	6,652	7,201	857	40,145	17,979	4,614	36,654
Wyoming	1,597	114			708			775
U.S. service schools								
Canal Zone								
Guam	420							420
Puerto Rico	29,360	2,031	5,304	414	12,365	1,751	35	7,460
Virgin Islands	717	12			705			

ENROLLMENT IN ADULT VOCATIONAL EDUCATION CLASSES, FISCAL YEAR 1966—TENTATIVE DATA

	Total	Agriculture	Distribution	Health	Home economics	Office	Technical	Trades and industry
Total	2,544,962	386,400	300,559	39,478	610,065	270,081	124,629	784,956
Alabama	47,223	16,508	802	2,409	3,927	739	1,276	21,562
Alaska	1,497	---	118	20	324	374	34	627
Arizona	14,601	102	3,457	50	3,758	188	1,891	5,155
Arkansas	40,895	9,920	2,215	---	15,338	1,434	---	11,988
California	367,678	333	107,623	3,391	62,133	48,117	34,689	111,392
Colorado	43,681	781	6,302	679	15,844	5,636	1,690	12,749
Connecticut	28,669	327	---	104	3,056	85	15,650	9,447
Delaware	3,217	225	---	95	---	---	231	2,666
District of Columbia	3,144	---	724	57	742	23	86	1,512
Florida	144,118	1,289	19,575	3,704	32,445	47,937	4,612	34,556
Georgia	97,060	33,304	8,593	1,464	17,941	---	5,153	30,605
Hawaii	5,692	510	294	---	1,147	79	128	3,534
Idaho	4,805	356	217	447	760	581	236	2,208
Illinois	47,467	8,364	542	1,739	12,135	1,133	4,863	18,691
Indiana	24,622	6,468	1,745	806	3,372	---	2,921	9,310
Iowa	42,370	17,564	2,209	50	6,643	759	2,195	12,950
Kansas	29,375	1,219	5,725	982	5,164	2,305	1,332	12,648
Kentucky	32,378	5,046	2,916	66	6,195	340	559	17,256
Louisiana	27,637	1,995	1,908	1,012	1,836	5,442	2,020	13,424
Maine	3,289	149	376	---	22	---	70	2,672
Maryland	22,072	680	1,111	87	10,209	4,556	564	4,865
Massachusetts	54,624	67	1,963	126	41,232	---	634	10,602
Michigan	107,480	1,529	20,116	746	16,614	5,409	4,883	58,183
Minnesota	67,053	11,120	4,250	120	18,632	6,529	4,711	21,691
Mississippi	39,100	18,369	1,822	283	5,602	1,678	2,605	8,741
Missouri	22,899	---	4,916	1,552	6,802	2,000	923	6,706
Montana	4,608	655	---	63	1,203	---	332	2,355
Nebraska	26,481	2,757	5,364	608	10,917	1,260	---	5,575
Nevada	6,543	65	154	90	1,036	1,257	1,951	1,990
New Hampshire	1,403	---	---	---	776	---	339	288
New Jersey	25,234	967	315	1,072	413	1,025	6,712	14,730
New Mexico	3,796	36	457	15	380	1,187	161	1,560
New York	151,523	2,447	3,246	585	28,212	62,429	3,487	51,117
North Carolina	90,497	22,783	892	1,439	10,827	6,537	2,033	45,986
North Dakota	7,314	1,372	---	---	4,010	486	---	1,446
Ohio	132,885	10,772	4,830	697	47,489	11,316	1,996	55,785
Oklahoma	21,426	6,487	13	1,298	10,035	589	902	2,102
Oregon	20,661	1,062	416	293	8,205	1,436	86	9,163
Pennsylvania	54,599	3,852	5,318	3,590	17,485	7,100	4,000	13,254
Rhode Island	3,024	103	---	87	1,267	---	253	1,314
South Carolina	60,729	25,617	3,602	787	27,008	131	348	3,236
South Dakota	6,030	2,501	---	---	95	1,195	---	2,239
Tennessee	36,964	1,971	5,251	2,365	11,536	546	1,005	14,290
Texas	290,377	147,426	28,946	2,642	73,867	712	4,822	31,962
Utah	17,924	978	2,374	206	6,558	1,488	440	5,880
Vermont	3,361	160	---	35	632	375	351	1,808
Virginia	54,153	7,320	22,388	502	3,225	4,306	695	15,717
Washington	49,201	1,408	4,718	977	21,716	12,147	286	7,949
West Virginia	14,987	658	1,231	405	5,646	606	341	6,100
Wisconsin	84,220	6,550	4,998	1,569	18,292	17,120	---	35,691
Wyoming	2,104	224	---	---	742	59	---	1,079
Guam	388	---	---	---	---	---	---	888
Puerto Rico	22,980	2,004	6,527	152	6,522	1,430	133	6,212
Virgin Islands	110	---	---	12	98	---	---	---
Other[1]	28,794	---	---	---	---	---	---	---

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[1] Not broken down by program.

ENROLLMENT, PERSONS WITH SPECIAL NEEDS, FISCAL YEAR 1965—TENTATIVE DATA

	Total	Agriculture	Distribution	Health	Home economics	Office	Technical	Trades and industry
Total	25,638	1,295	550	208	3,442	1,769		18,374
Alabama								
Alaska								
Arizona	209				209			
Arkansas	12		12					
California	121	51				49		21
Colorado	730		57		149			524
Connecticut	5	5						
Delaware								
District of Columbia								
Florida	66		66					
Georgia								
Hawaii								
Idaho								
Illinois	7,449							7,449
Indiana								
Iowa								
Kansas	194				194			
Kentucky								
Louisiana	37		37					
Maine								
Maryland	2,225	31			164	744		1,286
Massachusetts	61				15			46
Michigan								
Minnesota	40		40					
Mississippi	395	395						
Missouri	10				10			
Montana								
Nebraska								
Nevada	16							16
New Hampshire								
New Jersey	23	13			10			
New Mexico	70		52		18			
New York								
North Carolina	100			29	61			
North Dakota								
Ohio	25		25					10
Oklahoma	2,000	720			1,280			
Oregon								
Pennsylvania	3,798	15		158	22			3,603
Rhode Island	62							62
South Carolina	166		31		90	45		
South Dakota	13				13			
Tennessee	36				36			
Texas	838		19		161	20		638
Utah	406		121		285			
Vermont								
Virginia	112		60					52
Washington	112	65	30	17				
West Virginia								
Wisconsin	3,419				725	231		2,463
Wyoming								
U.S. service schools								
Canal Zone								
Guam								
Puerto Rico	2,888			4		680		2,204
Virgin Islands								

ENROLLMENT, PERSONS WITH SPECIAL NEEDS, FISCAL YEAR 1966—TENTATIVE DATA

	Total	Agriculture	Distribution	Health	Home economics	Office	Technical	Trades and industry
Total	59,557	700	2,337	315	24,533	3,086	70	27,417
Alabama	171							171
Alaska	1,170				261			909
Arizona	283	67	16		200			
Arkansas	136		32			8		96
California	78	56					8	14
Colorado	1,320	10			75	798		437
Connecticut	137					137		
Delaware	35						3	32
District of Columbia	915				915			
Florida	621	135	446	10				30
Georgia								
Hawaii								
Idaho	4				4			
Illinois	749		588					161
Indiana	113							113
Iowa	9				9			
Kansas	70				70			
Kentucky								
Louisiana	808			89		263	20	436
Maine								
Maryland	2,571	133			196	916		1,326
Massachusetts								
Michigan								
Minnesota	661		650			11		
Mississippi	799	26			566			207
Missouri	883	47		15	238	583		
Montana	71				33	16		22
Nebraska	464	36	54					374
Nevada	177				32	85		60
New Hampshire								
New Jersey	1,262	50			991	73	25	123
New Mexico	83			16				67
New York								
North Carolina	650		55		479			116
North Dakota	46				13			33
Ohio	941		20					921
Oklahoma								
Oregon	81			18	63			
Pennsylvania	15,278			137			14	15,127
Rhode Island	124							124
South Carolina	162		38		109	15		
South Dakota								
Tennessee	160	1	3		18	2		136
Texas	2,815	65	108		1,049	38		1,555
Utah	540		280		249			11
Vermont								
Virginia	809		40	13		141		615
Washington	108	35			73			
West Virginia	52	29			23			
Wisconsin	2,238		7		1,679			552
Wyoming	54				54			
Guam								
Puerto Rico	20,810	10		17	17,134			3,649
Virgin Islands								
Other[1]	1,099							

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[1] Not broken down by program.

PROJECT STATUS AND EXPENDITURES FOR AREA SCHOOL CONSTRUCTION—SUMMARY

Types of schools (unduplicated count)	Special high high school		Department of High School		Technical-Vocational		Department of Higher Education		Total	
	Fiscal year 1965	Fiscal year 1966	Fiscal year 1965	Fiscal year 1966	Fiscal year 1965	Fiscal year 1966	Fiscal year 1965	Fiscal year 1966	Fiscal year 1965	Fiscal year 1966
From 4220 reports	44	28	73	108	56	57	41	36	214	[1] 229
From Appalachian reports:										
VEA, 1963 funds included						8				
No VEA, 1963 funds						2				
Total	44	28	73	108	56	67	41	36	214	239
									453	

[1] Includes 7 Appalachia projects with combined funding.

Funding	Federal (VEA 1963)	State	Local	Total
(4220) fiscal year 1965	41,590,397	17,344,668	47,679,489	106,614,554
(4220) fiscal year 1966	61,149,632	25,799,634	76,670,648	163,619,914
From Appalachian reports, fiscal year 1966	1,139,480	384,000	404,000	1,927,480
Total, fiscal year 1966	62,289,112	26,183,634	77,074,648	165,547,394

Note: Source for these statistics are fiscal years 1965 and 1966 4220 reports submitted by States. No Appalachian 211 or 214 funds are included.

Number and Types of Schools Funded, Fiscal Years 1965–66

	Schools			Special high schools		Department of high schools		Technical-Vocational		Department of higher education		Projects[1]	
	1965	1966	Total	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966
Total	214	239	453	44	28	73	108	56	67	41	36	228	350
Alabama	6	6	12	3	1	3			5			6	7
Alaska			0										
Arizona			0										
Arkansas	3	10	13	1		1	1	1	9			3	10
California	22	13	35		1	6	3			16	9	27	32
Colorado	3		3			1				2		3	2
Connecticut			0										
Delaware		1	1						1				1
District of Columbia	1	5	6	1	5							1	17
Florida	1	2	3					1	2			1	2
Georgia[2]	5	2	7					5	2			5	5
Hawaii	1		1					1				1	1
Idaho	1	1	2							1	1	2	3
Illinois		4	4		1		3						4
Indiana	2	9	11			1	6	1	3			2	9
Iowa		2	2						2				2
Kansas	2	4	6			1	4	1				2	7
Kentucky[2]	8	14	22					8	14			8	16
Louisiana			0										
Maine			0										
Maryland	5	5	10	1	2	3	3			1		5	5
Massachusetts	8		8	8								8	8
Michigan	8	9	17		1	4	3			4	5	8	11
Minnesota	10	8	18					10	8			10	8
Mississippi	3	7	10				1			3	6	6	10
Missouri	3	12	15	1		2	11				1	3	15
Montana			0										
Nebraska	1	2	3			1	1		1			1	2
Nevada	1	1	2	1							1	1	2
New Hampshire	2	4	6			2	3		1			2	4
New Jersey	16	5	21	10	1	5	3	1	1			16	13
New Mexico	2	1	3			1		1			1	2	2
New York		3	3		3								3
North Carolina[2]	5	10	15				2	5	8			5	13
North Dakota	1		1					1				1	
Ohio	16	12	28	4	5	12	7					16	14
Oklahoma	2	2	4			2	2					2	4
Oregon	3	1	4					1		2	1	3	2
Pennsylvania	6	5	11	6	5							6	5
Rhode Island	1	3	4				3			1		1	3
South Carolina	5	4	9	2	1	2	2	1	1			5	4
South Dakota	1	2	3				2	1				1	2
Tennessee[2]	7	5	12					7	5			7	7
Texas	28	40	68			17	30		1	11	9	33	55
Utah	2		2					2				2	1
Vermont	1	2	3			1	2					1	2
Virginia	6	13	19	3	2	2	9	1	1		1	6	19
Washington		1	1						1				1
West Virginia	5	7	12			5	7					5	10
Wisconsin	7	1	8					7	1			7	5
Wyoming		1	1								1		1
Guam			0										
Puerto Rico	4				3		1					4	1
Virgin Islands			0										

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[1] Projects funded: F. P. & D., PPDB, and BVTE.
[2] Including Appalachia.

Types of Construction[1]

	Schools		New		New addition		Renovation		New addition and renovation		Projects funded	
	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966
Total	214	239	67	70	109	138	22	27	14	4	228	350
Alabama	6	6	3	5	3	1					6	7
Alaska	0	0	0									
Arizona	0	0	0									
Arkansas	3	10	1	8	2	2					3	10
California	22	13	0		15	10	7	3			27	32
Colorado	3	0	1				1		1		3	2
Connecticut	0	0	0									
Delaware	0	1	0	1								
District of Columbia	1	5	0		1			5			1	17
Florida	1	2	0	2	1						1	2
Georgia	5	2	2	[2]1	3			1			5	5
Hawaii	1	0	0		1						1	1
Idaho	1	1	0		1	1					2	[illegible]
Illinois		4	0	1		2		1				4
Indiana	2	9	1	1	1	6		2			2	9
Iowa		2	0	2								2
Kansas	1	5	0		1	5					2	7
Kentucky	8	14	8	[3]14							8	16
Louisiana	0	0	0									
Maine	0	0	0									
Maryland	5	5	2	2	3	3					5	5
Massachusetts	8	0	8								8	8
Michigan	8	9	0	2	2	6	1	1	5		8	11
Minnesota	10	8	7	3	1	4	2	1			10	8
Mississippi	3	7	0		3	7					6	10
Missouri	3	12	0	1	3	6		5			3	15
Montana	0	0	0									
Nebraska	1	2	0	1	1	1					1	2
Nevada	1	1	1					1			1	2
New Hampshire	2	4	0	1	2	2				1	2	4
New Jersey	16	5	5		5	3	6	2			16	13
New Mexico	2	1	0		2	1					2	2
New York	0	3	0	3								3
North Carolina	5	10	3	1	2	9					5	13
North Dakota	0	1	0	1							1	
Ohio	16	12	4	3	5	8	5		2	1	16	14
Oklahoma	2	2	0		2	2					2	4
Oregon	3	1	0		3	1					3	2
Pennsylvania	6	5	5	5	1						6	5
Rhode Island	1	3	0		1	3					1	3
South Carolina	5	4	3	3	2	1					5	4
South Dakota	1	2	1			2					1	2
Tennessee	7	5	7	[2]5							7	7
Texas	28	40	0	5	22	31		3	6	1	33	55
Utah	2	0	2								2	1
Vermont	1	2	0		1	2					1	2
Virginia	6	13	0	1	6	11				1	6	19
Washington	0	1	0					1				1
West Virginia	5	7	0		5	6		1			5	10
Wisconsin	7	1	2		5	1					7	5
Wyoming	0	1	0			1						1
Guam	0	0	0									
Puerto Rico	4	0	1		3	3					4	1
Virgin Islands	0	0	0									

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[1] Estimated, based on dollar value indicated in 4220's.

[2] 1 school; no VEA funds.

[3] VEA funds used in appalachian project schools.

NOTES TO DATA SHEET "TYPES OF CONSTRUCTION"

Column 3 of OE 4220 report indicates "Type of construction with the following code:

E—Expansion, Remodeling and Alterations
F—Construction of New Buildings

To differentiate between new construction for a new school, a new addition or expansion to an existing school plant, and renovation, alteration or remodeling to an existing school facility the data sheet attached uses a code as follows:

N—New construction for a new school
NA—New construction of an addition to an existing school plant
R—Renovation to an existing school plant
NA-R—Indicates both a new addition and renovation were involved in project.

PROJECT STATUS AND EXPENDITURES OF VOCATIONAL AREA SCHOOL CONSTRUCTION FISCAL YEAR 1965 (VEA 1963 FUNDS)

	Number of schools	Funds expended			
		Total	Federal	State	Local
Total	214	106,614,554	41,590,397	17,344,668	47,679,489
Alabama	6	4,790,000	2,065,000	1,250,000	1,475,000
Alaska	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	3	1,690,000	845,000	100,000	745,000
California	22	5,963,980	1,530,492	0	4,433,488
Colorado	3	622,000	311,000	0	311,000
Connecticut	0	0	0	0	0
Delaware	0	0	0	0	0
District of Columbia	1	104,000	51,500	52,500	0
Florida	1	67,379	32,808	0	34,571
Georgia	5	2,652,000	1,326,000	0	1,326,000
Hawaii	1	201,000	100,500	100,500	0
Idaho	1	155,448	20,000	130,000	5,448
Illinois	0	0	0	0	0
Indiana	2	4,577,116	2,288,558	0	2,288,558
Iowa	0	0	0	0	0
Kansas	2	1,404,090	702,045	0	702,045
Kentucky	8	3,052,106	1,526,053	495,000	1,031,053
Louisiana	0	0	0	0	0
Maine	0	0	0	0	0
Maryland	5	5,596,000	1,247,000	3,105,000	1,244,000
Massachusetts	8	2,399,983	792,480	127,504	1,479,999
Michigan	8	3,611,622	1,805,811	0	1,805,811
Minnesota	10	7,210,439	1,210,439	0	6,000,000
Mississippi	3	1,635,577	533,424	0	1,102,153
Missouri	3	729,857	364,928	0	364,929
Montana	0	0	0	0	0
Nebraska	1	826,777	413,388	0	413,389
Nevada	1	249,373	118,781	0	130,592
New Hampshire	2	615,280	217,418	0	397,862
New Jersey	16	3,544,817	1,223,665	159,774	2,161,378
New Mexico	2	610,652	305,326	93,730	211,596
New York	0	0	0	0	0
North Carolina	5	3,239,857	1,296,955	370,000	1,572,902
North Dakota	1	645,326	311,326	334,000	0
Ohio	16	9,060,772	4,530,386	0	4,530,386
Oklahoma	2	1,765,678	882,839	0	882,839
Oregon	3	1,064,898	530,997	315,163	218,738
Pennsylvania	6	10,900,556	2,393,910	6,112,766	2,393,880
Rhode Island	1	1,377,800	577,800	800,000	0
South Carolina	5	1,847,419	814,415	0	1,033,004
South Dakota	1	600,000	300,000	0	300,000
Tennessee	7	2,550,878	1,275,439	875,439	400,000
Texas	28	11,748,080	5,819,370	0	5,928,710
Utah	2	1,914,000	265,000	1,549,000	100,000
Vermont	1	241,761	113,400	0	128,361
Virginia	6	720,723	357,257	0	363,466
Washington	0	0	0	0	0
West Virginia	5	1,696,800	848,400	0	848,400
Wisconsin	7	2,191,571	876,640	0	1,314,931
Wyoming	0	0	0	0	0
Guam	0	0	0	0	0
Puerto Rico	4	2,738,939	1,364,647	1,374,292	0
Virgin Islands	0	0	0	0	0

Fiscal Year 1966

Total	239	165,547,394	62,289,112	26,183,634	77,074,648
Alabama	6	4,034,640	1,973,650	0	2,060,990
Alaska	0	0	0	0	0
Arizona	0	0	0	0	0
Arkansas	10	3,270,000	1,635,000	1,575,000	60,000
California	13	3,776,655	1,617,372	0	2,159,283
Colorado	0	938,000	469,000	0	469,000
Connecticut	0	0	0	0	0
Delaware	1	356,276	178,138	178,138	0
District of Columbia	5	337,566	168,782	168,784	0
Florida	2	1,294,558	434,558	860,000	0
Georgia	2	491,000	245,500	0	245,500
Hawaii	0	372,056	186,028	186,028	0
Idaho	1	315,745	140,640	31,531	143,574
Illinois	4	6,000,000	3,000,000	0	3,000,000
Indiana	9	5,468,490	2,734,245	0	2,734,245
Iowa	2	2,300,000	0	1,500,000	800,000
Kansas	4	1,775,938	887,969	0	887,969
Kentucky	14	4,528,632	2,830,681	384,000	1,313,951
Louisiana	0	0	0	0	0
Maine	0	0	0	0	0
Maryland	5	3,233,283	831,819	2,006,358	395,106
Massachusetts	0	12,621,816	4,852,031	2,161,000	5,608,785
Michigan	9	12,527,062	3,702,658	1,300,000	7,524,404
Minnesota	8	4,149,757	1,685,575	0	2,464,182
Mississippi	7	3,214,226	1,337,462	0	1,876,764
Missouri	12	5,439,403	1,890,044	93,369	3,455,990
Montana	0	0	0	0	0
Nebraska	2	558,488	279,244	194,660	84,584
Nevada	1	2,745,726	40,861	117,139	2,587,726
New Hampshire	4	3,689,493	729,299	383,805	2,576,389
New Jersey	5	4,872,010	1,538,180	104,500	3,229,330
New Mexico	1	728,620	300,553	60,000	368,067
New York	3	718,244	384,912	229,416	103,916
North Carolina	10	2,689,101	1,162,598	891,578	634,925
North Dakota	0	0	0	0	0
Ohio	12	12,840,323	6,123,838	0	6,716,485
Oklahoma	2	2,358,449	992,755	186,470	1,179,224
Oregon	1	1,944,212	600,000	574,668	769,544
Pennsylvania	5	15,824,965	2,165,598	7,551,365	6,108,002
Rhode Island	3	2,936,000	783,382	2,152,618	0
South Carolina	4	1,796,338	898,169	90,000	808,169
South Dakota	2	1,200,000	600,000	0	600,000
Tennessee	5	4,268,122	2,021,177	2,246,945	0
Texas	40	15,516,121	6,821,468	0	8,694,653
Utah	0	1,059,483	208,573	0	850,910
Vermont	2	736,871	357,433	379,438	0
Virginia	13	3,688,885	1,475,620	245,759	1,967,506
Washington	1	55,315	27,657	0	27,658
West Virginia	7	4,472,155	1,962,171	171,065	2,338,919
Wisconsin	1	3,688,369	1,704,472	0	1,983,897
Wyoming	1	395,000	150,000	0	245,000
Guam	0	0	0	0	0
Puerto Rico	0	320,000	160,000	160,000	0
Virgin Islands	0	0	0	0	0

NUMBER OF SCHOOLS OFFERING VOCATIONAL EDUCATION, BY TYPE OF INSTITUTION, FISCAL YEAR 1965—TENTATIVE DATA

State or territory	Grand total	Vocational technical (secondary)		Technical vocational (postsecondary)	Community or junior college	University or college	Regular or comprehensive secondary school	Combination secondary-postsecondary vocational technical school	Under contract—private school(s), institution(s), association(s), government(s), offering programs
		Area or regional	Local						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Total	17,095	294	100	225	325	72	15,938	130	11
Alabama	446	2					433	11	
Alaska	45				10	3	32		
Arizona	102				4	3	95		
Arkansas	399	2	1			1	393	1	1
California	715				78		637		
Colorado	187				6	3	173	1	4
Connecticut	104	14		4		1	85		
Delaware	57	3					54		
Florida	492			6	26		438	22	
Georgia	571		10	30	1		530		
Hawaii	57	6		1			50		
Idaho	124				2	2	120		
Illinois	658			2	16	1	636	3	
Indiana	498		1		1	1	495		
Iowa	327	7			8	2	309	1	
Kansas	248				7	6	228	7	
Kentucky	336	21	1				314		
Louisiana	508	30	2				476		
Maine	85			8		1	76		
Maryland	173	2			7		164		
Massachusetts	57	57							
Michigan	471		6		16	10	438	1	
Minnesota	413				2		392	19	
Mississippi	449				18	1	430		
Missouri	405			3	16	2	371	13	
Montana	99			1	2	1	95		
Nebraska	162			1			161		

NUMBER OF SCHOOLS OFFERING VOCATIONAL EDUCATION, BY TYPE OF INSTITUTION, FISCAL YEAR 1965—TENATIVE DATA—Continued.

State or territory	Grand total	Vocational technical (secondary)		Technical vocational (postsecondary)	Community or junior college	University or college	Regular or comprehensive secondary school	Combination secondary-postsecondary vocational technical school	Under contract—private school(s), institution(s), association(s), government(s), offering programs
		Area or regional	Local						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Nevada	38					2	28	8	
New Hampshire	58			3			55		
New Jersey	157	28	2	7			117	3	
New Mexico	118				4	5	109		
New York	787	62	29		17		679		
North Carolina	716			12	2	2	700		
North Dakota	12			1	2	3	6		
Ohio	680	3	10	22	1	1	640		3
Oklahoma	548			4	13	2	527	2	
Oregon	156			3	8		144		1
Pennsylvania	750	17	3	10	2		708	10	
Rhode Island	31	1	5				23	2	
South Carolina	345	2		9	1		331		2
South Dakota	127						121	6	
Tennessee	1,193		14	10			1,159	10	
Texas	1,009		3	1	28	5	972		
Utah	79			4	1	1	72	1	
Vermont	68			3			65		
Virginia	553	9	10	6	2	4	517	5	
Washington	299			10	17		272		
West Virginia	238	17			1	7	212	1	
Wisconsin	365		1	62	1		301		
Wyoming	109				5		104		
District of Columbia	10	6		1			3		
Guam	4		1				3		
Puerto Rico	450	5		1		2	439	3	
Virgin Islands	7		1				6		

NUMBER AND TYPE OF SCHOOLS (UNDUPLICATED COUNT) OFFERING 1 OR MORE TYPES OF VOCATIONAL EDUCATION PROGRAMS, FISCAL YEAR 1966—TENTATIVE DATA

	Grand total	Vocational and/or technical (secondary)		Technical and vocational postsecondary	Community or junior college	University or college	Reg. or Comp. H.S.	Combination	Under contract
		Area or regional	Local						
Total	17,011	373	100	322	387	169	15,473	172	15
Alabama	485	2			1	1	458	23	
Alaska	29				4	1	24		
Arizona	104				6	3	95		
Arkansas	412	3	0	5	0	1	401	0	2
California	734				77		657		
Colorado	169	1	0	1	7	2	154	1	3
Connecticut	113	14		4	3	1	91		
Delaware	46	3					43		
District of Columbia	16	5		1			10		
Florida	496		1	18	22	1	439	14	1
Georgia	509			36	2		471		
Hawaii	52			1	5		46		
Idaho	132				4	1	127		
Illinois	697	0	4	2	19	0	669	0	3
Indiana	319		1	1	1	1	315		
Iowa	353	16	4	8	12	3	308	2	0
Kansas	245				9	6	220	10	
Kentucky	336	21				1	314		
Louisiana	339						306	33	
Maine	98			5		1	92		
Maryland	196	3	0	0	7	1	185	0	0
Massachusetts	57	57							
Michigan	606				21	10	574	1	
Minnesota	395						376	19	
Mississippi	442	0	0	0	16	0	426	0	0
Missouri	418	28	4	1	8	3	369	5	0
Montana	110				2	1	106	1	
Nebraska	190			5	3	4	178		
Nevada	50		8	1		2	32	4	3
New Hampshire	71	7		5			57	2	
New Jersey	428	99	1	16			299	13	
New Mexico	234	3	1	3	3	4	220		
New York	926	28	40		51	12	795		
North Carolina	735			31	12		692		
North Dakota	141			1	5	5	130		
Ohio	675	15		17	1	0	629	13	0
Oklahoma	460	1	1	3	9	2	441	3	
Oregon	164			2	9		152	1	
Pennsylvania	722	17		18	4		675	8	
Rhode Island	32	1	8	1			22		
South Carolina	301	3	3	11			281		3
South Dakota	172				3		169		
Tennessee	483	7	14	15			440	7	
Texas	1,415		3	4	32	6	1,370		
Utah	86			2	3	3	78		
Vermont	67			3			64		
Virginia	510	22	5	28	3	5	443	4	
Washington	146	0	0	8	16	82	37	3	0
West Virginia	191	7		1	1	2	180		
Wisconsin	439		1	53	1		374		
Wyoming	84				5	1	78		
U.S. service schools									
Canal Zone									
Guam	3		1				2		
Puerto Rico	374	6		1		3	359	5	
Virgin Islands	4	4							

NUMBER OF TEACHERS OF VOCATIONAL EDUCATION CLASSES BY LEVEL OF PROGRAM; FULL AND PART TIME, BY STATE OR TERRITORY, FISCAL YEAR 1965—TENTATIVE DATA

State or territory	Grand total, unduplicated count	Secondary		Postsecondary		Number of adult teachers part time—				Teachers for persons with special needs	
		Full time	part time	Full time	Part time	Number of full time	That are secondary teachers	That are postsecondary teachers	From business industry, etc.	Full time	Part time
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Total	109,136	41,366	13,382	6,963	6,620	4,973	14,836	5,021	29,218	346	756
Alabama	1,743	1,014	16	269	17	9	569	33	405	2	-
Alaska	131	24	12	3	41	3	11	6	30	-	1
Arizona	680	270	296	51	86	-	31	29	232	-	-
Arkansas	1,131	437	386	62	8	12	722	21	271	3	-
California	13,750	1,296	1,505	1,958	2,803	8	673	1,403	2,209	6	10
Colorado	1,541	196	179	138	72	18	73	256	620	12	16
Connecticut	1,060	573	13	85	1	26	142	56	362	-	-
Delaware	284	106	53	-	-	4	37	-	121	-	-
Florida	3,529	928	10	185	122	399	230	276	1,877	8	-
Georgia	2,765	1,120	52	60	-	577	338	118	931	-	-
Hawaii	418	25	134	83	7	-	16	17	135	-	-
Idaho	433	118	121	57	-	22	36	21	109	-	-
Illinois	3,638	1,009	751	64	100	156	288	33	1,209	28	-
Indiana	1,917	687	406	20	194	28	8	11	558	3	2
Iowa	1,648	621	66	75	27	87	492	49	231	-	-
Kansas	1,356	377	119	52	39	9	99	17	760	-	-
Kentucky	1,290	816	14	-	-	240	379	-	210	-	-
Louisiana	1,806	495	373	196	15	453	331	59	207	-	1
Maine	369	79	72	57	4	-	13	34	126	-	-
Maryland	1,446	1,072	133	23	13	142	358	-	-	11	56
Massachusetts	4,563	1,004	470	122	86	-	495	52	2,328	-	6
Michigan	3,523	1,488	382	337	611	3	138	173	391	-	-
Minnesota	3,009	1,370	532	209	78	51	708	409	395	-	2
Mississippi	1,229	925	24	88	35	14	354	40	144	-	-
Missouri	2,116	933	548	30	39	74	240	19	418	3	17
Montana	323	41	124	9	3	-	44	-	146	-	-
Nebraska	756	307	2	51	29	5	132	-	230	-	-
Nevada	398	137	46	22	-	-	14	5	189	1	-
New Hampshire	206	111	3	48	11	16	12	15	17	-	-
New Jersey	2,015	893	356	64	97	101	189	41	514	19	2
New Mexico	455	140	180	25	17	-	14	3	84	2	-

New York	8,403	6,215	349	-----	10	33	1,770	1	3,466	-----	-----
North Carolina	4,205	1,821	-----	283	98	131	1,349	304	1,301	12	203
North Dakota	419	53	150	98	16	2	49	12	122	-----	-----
Ohio	3,350	1,161	366	212	170	77	613	239	1,031	25	-----
Oklahoma	1,240	1,021	36	52	30	68	213	37	93	-----	20
Oregon	1,059	160	181	104	158	15	45	25	441	-----	-----
Pennsylvania	5,574	1,449	2,732	42	-----	104	709	404	700	38	38
Rhode Island	270	96	37	5	-----	44	64	-----	68	-----	-----
South Carolina	1,708	943	202	66	64	340	66	137	195	1	4
South Dakota	370	131	103	26	-----	-----	92	-----	99	-----	1
Tennessee	1,620	719	369	69	10	116	349	9	327	1	-----
Texas	5,257	3,766	89	117	162	1,144	978	19	969	34	2
Utah	670	284	137	25	5	-----	102	26	207	4	17
Vermont	279	53	112	21	2	2	30	-----	102	-----	-----
Virginia	3,863	2,046	581	198	2	37	977	96	1,074	-----	2
Washington	4,461	814	279	425	976	236	72	18	395	77	286
West Virginia	764	334	88	22	8	24	88	-----	288	-----	-----
Wisconsin	3,994	294	183	701	342	75	-----	493	2,468	56	-----
Wyoming	54	1	10	6	1	-----	3	2	31	-----	-----
District of Columbia	178	58	-----	23	7	-----	11	1	89	-----	-----
Guam	30	5	-----	-----	-----	-----	4	-----	12	-----	-----
Puerto Rico	1,817	1,306	-----	25	4	68	61	2	281	-----	70
Virgin Islands	23	23	-----	-----	-----	-----	5	-----	-----	-----	-----

NUMBER OF TEACHERS IN ALL VOCATIONAL EDUCATION PROGRAMS, FISCAL YEAR 1966—TENTATIVE DATA

	Total unduplicated count	Secondary		Post-secondary		Adult				Special needs	
		Full time	Part time	Full time	Part time	Full time	Part time, secondary	Part time, post-secondary	Part time, from business	Full time	Part time
Total	127,224	50,777	16,149	9,651	9,470	4,162	17,484	9,710	26,631	512	694
Alabama	2,341	1,314	22	50	----	348	551	----	581	9	----
Alaska	139	52	10	2	0	4	17	5	49	1	9
Arizona	750	344	217	97	162	8	61	23	204	1	9
Arkansas	1,976	409	413	88	0	10	706	21	314	12	3
California	14,682	1,659	3,419	1,782	4,048	179	1,336	2,936	1,782	7	10
Colorado	1,615	291	146	189	80	60	129	281	680	8	23
Connecticut	1,208	612	19	131	26	13	141	54	376	----	----
Delaware	374	214	65	----	----	5	29	----	90	----	----
District of Columbia	159	64	----	24	7	----	15	1	59	4	----
Florida	4,204	1,252	342	319	120	451	581	40	1,583	21	----
Georgia	3,262	1,383	47	71	55	544	575	223	1,091	----	12
Hawaii	422	22	99	101	20	9	26	22	130	----	2
Idaho	508	132	141	74	11	19	35	25	141	----	----
Illinois	3,837	911	1,270	160	82	136	3	32	1,142	32	69
Indiana	2,255	727	424	17	24	22	270	11	752	----	8
Iowa	2,708	1,198	236	113	116	5	425	211	402	----	2
Kansas	1,331	415	101	71	43	6	129	134	488	----	2
Kentucky	1,648	847	261	157	3	29	345	93	212	----	----
Louisiana	1,896	808	333	404	48	8	348	176	229	21	1
Maine	355	77	77	66	4	----	15	55	121	----	----
Maryland	1,579	1,240	156	55	23	162	391	----	----	22	75
Massachusetts	5,571	1,024	1,289	145	246	----	492	40	2,309	2	24
Michigan	4,708	1,208	1,195	311	1,127	4	414	185	789	----	----
Minnesota	2,946	1,498	323	251	62	36	746	108	727	7	1
Mississippi	1,355	762	161	110	46	51	387	34	165	22	----
Missouri	2,598	814	1,200	109	33	24	205	14	419	3	24
Montana	346	53	150	17	13	----	47	1	108	----	5
Nebraska	887	234	203	66	53	1	129	3	342	----	11

Nevada	460	127	86	22	15	----	44	----	172	7	6
New Hampshire	244	107	4	65	3	----	26	23	16	----	----
New Jersey	2,205	1,076	610	98	10	40	243	60	389	19	----
New Mexico	520	118	237	25	31	3	36	9	99	7	----
New York	10,605	7,177	313	1,328	----	7	1,621	10	2,207	1	----
North Carolina	5,497	2,089	243	534	202	13	364	222	2,035	9	7
North Dakota	631	114	204	130	28	2	62	22	113	3	1
Ohio	4,888	1,784	235	256	183	407	654	141	1,344	43	1
Oklahoma	1,310	1,036	76	79	29	38	739	9	32	----	1
Oregon	1,587	237	139	144	354	4	85	40	58	----	4
Pennsylvania	5,778	4,178	204	22	38	649	744	15	650	29	8
Rhode Island	228	105	42	----	----	7	51	----	74	----	----
South Carolina	1,778	910	295	85	104	35	84	203	76	1	4
South Dakota	411	142	91	39	3	13	135	5	58	----	----
Tennessee	1,846	846	301	123	23	134	346	15	396	2	----
Texas	5,586	3,992	28	170	195	192	2,415	15	877	95	7
Utah	838	353	167	237	2	1	118	49	277	2	22
Vermont	333	70	113	30	4	2	34	----	109	----	----
Virginia	4,013	3,248	81	238	16	33	778	110	963	17	20
Washington	3,578	814	279	425	976	236	72	18	395	77	286
West Virginia	978	532	24	38	----	1	111	2	381	2	----
Wisconsin	6,196	610	8	519	790	137	----	4,010	122	----	----
Wyoming	232	96	49	9	8	3	25	2	66	----	1
U.S. service schools	----	----	----	----	----	----	----	----	----	----	----
Canal Zone	----	----	----	----	----	----	----	----	----	----	----
Guam	42	12	1	----	----	----	6	----	13	----	----
Puerto Rico	1,740	1,415	----	55	4	71	128	2	424	26	36
Virgin Islands	40	25	----	----	----	----	5	----	----	----	----

STATUS OF TEACHER TRAINING IN VOCATIONAL EDUCATION, ALL PROGRAMS, FISCAL YEAR 1965—TENTATIVE DATA

State or territory	Number of programs approved	Number enrolled		Number completing State plan requirements		Number completing State plan requirements placed in fields trained		Estimated number that will complete State plan requirements next year, secondary only	Estimated need, next report year secondary only
		Preservice	Inservice	Secondary	Adult	Secondary	Adult		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Total	592	33,771	35,280	11,484	5,172	6,278	2,350	10,768	9,963
Alabama	12	1,061	606	230	38	-----	-----	194	354
Alaska	1	47	2	-----	7	-----	2	-----	-----
Arizona	8	1,959	794	231	117	110	155	247	289
Arkansas	13	453	388	191	2	112	2	209	122
California	6	1,735	950	852	292	68	-----	321	290
Colorado	8	239	568	137	137	103	137	115	133
Connecticut	8	374	291	164	-----	38	-----	162	70
Delaware	7	68	57	35	-----	1	-----	42	9
Florida	15	355	976	145	65	115	8	128	256
Georgia	7	559	684	187	224	121	226	170	43
Hawaii	5	33	166	6	-----	5	-----	6	12
Idaho	10	105	272	62	4	8	-----	70	53
Illinois	19	507	446	414	74	260	61	389	335
Indiana	9	847	424	293	341	171	16	251	294
Iowa	8	436	694	303	189	183	48	247	257
Kansas	7	436	323	160	55	75	45	355	181
Kentucky	13	362	490	179	-----	13	-----	177	120
Louisiana	16	469	331	136	67	70	2	172	140
Maine	8	7	89	45	30	7	-----	36	48
Maryland	6	421	-----	25	-----	19	-----	119	15
Massachusetts	6	512	1,863	1,007	1,029	858	-----	344	118
Michigan	26	2,329	2,094	265	54	269	-----	345	178
Minnesota	25	2,162	765	311	262	212	110	576	250

Mississippi	10	393	305	218	40	89	18	226	136
Missouri	21	1, 189	442	223	----------	253	----------	317	436
Montana	4	188	160	68	----------	33	----------	70	60
Nebraska	3	186	117	79	----------	38	19	120	135
Nevada	5	305	193	57	----------	21	35	49	110
New Hampshire	3	160	82	22	----------	12	2	25	33
New Jersey	5	985	425	136	----------	131	----------	175	383
New Mexico	14	344	145	87	22	26	22	147	102
New York	53	795	922	679	----------	535	20	505	625
North Carolina	11	470	582	269	----------	148	----------	325	443
North Dakota	8	251	81	60	61	38	----------	100	74
Ohio	23	803	5, 459	881	622	221	----------	506	477
Oklahoma	8	777	586	308	30	49	1	240	159
Oregon	5	618	1, 039	174	380	14	340	77	87
Pennsylvania	18	3, 310	2, 371	456	6	138	3	371	722
Rhode Island	13	108	61	64	----------	36	----------	42	10
South Carolina	7	359	595	99	41	70	41	115	165
South Dakota	6	235	35	49	----------	40	----------	66	69
Tennessee	17	415	29	301	85	168	89	326	178
Texas	33	2, 090	3, 407	749	131	544	137	946	1, 005
Utah	16	741	686	290	----------	175	63	415	297
Vermont	7	53	----------	29	----------	9	1	29	36
Virginia	21	1, 087	1, 326	362	322	262	322	386	364
Washington	4	294	1, 300	100	313	75	291	151	115
West Virginia	7	98	44	100	1	95	1	106	59
Wisconsin	8	1, 614	1, 303	----------	128	78	128	----------	----------
Wyoming	5	112	72	50	3	37	3	44	40
District of Columbia	1	----------	80	----------	----------	----------	----------	5	5
Guam	----------	----------	----------	----------	----------	----------	----------	----------	----------
Puerto Rico	4	312	77	196	----------	125	2	209	71
Virgin Islands	5	----------	23	----------	----------	----------	----------	----------	----------

STATUS OF TEACHER-TRAINING IN ALL VOCATIONAL EDUCATION PROGRAMS, FISCAL YEAR 1966—TENTATIVE DATA

	Number of approved programs	Teacher-trainers		Enrollees in teacher-training		Completed		Number completed and placed, secondary		Number completed and placed, adult		Estimated number to complete next year secondary	Estimated need next year, secondary
		Full time	Part time	Preservice	In service	Secondary	Adult	In State	Out	In State	Out		
Total	638	901	1,239	38,774	38,317	12,947	5,082	7,121	914	2,488	141	13,536	13,257
Alabama	13	17	1	1,098	490	191	22	14	1			263	203
Alaska	1		2	2	64								
Arizona	12	14	4	3,125	594	237	29	103	33	2	1	253	363
Arkansas	13	12	9	493	242	158	4	74	36	120	0	213	135
California	6	11	37	54	2,555	501	1,091	88				668	599
Colorado	8	10	15	165	526	158	72	87	25	101	0	146	131
Connecticut	9	4	21	262	259	167	38	54	2	20	0	177	150
Delaware	4	6	1	143	56	28			1			46	13
District of Columbia	4		1		112	3		3				7	15
Florida	13	18	13	530	1,538	147	153	72	2	124	5	232	437
Georgia	44	4	8	468	822	161	291	101	7	291	0	206	222
Hawaii	4	3	4	35	214								
Idaho	7	8	5	249	113	93	84	55	20	83	2	96	96
Illinois	26	24	42	509	733	328	73	225	0	0	0	433	515
Indiana	4	31	14	873	833	178	217	121	36	217	0	328	277
Iowa	10	34	14	874	476	262	71	136	21	25		315	323
Kansas	8	15	4	629	364	295	62	82	19	28	2	323	105
Kentucky	19	23	15	1,541	495	308		128	97			367	274
Louisiana	22	22	17	415	811	220	93	98		93		266	250
Maine	3	2	5	269	125	49		53					75
Maryland	6	5	9	496		112		98				205	295
Massachusetts	7	2	110	830	1,174	414	291	139	14	50		513	485
Michigan	35	21	50	1,504	1,820	1,663	42	1,606		36		924	840
Minnesota	17	50	67	2,264	1,979	516	116	338	59	148	8	369	432
Mississippi	11	11	14	441	375	233	220	91	23	200	0	270	143
Missouri	25	33	45	1,810	706	419		439	139			550	227
Montana	5	4	1	215	190	59		24	6			88	67
Nebraska	5	9	12	217	213	94	0	78	6	0	6	181	175

Nevada	10	3	9	265	145	23	104	13	5	9	0	35	46
New Hampshire	3	2	3	190	89	33		14	8			34	43
New Jersey	9	33	11	985	485	136		124	7			175	383
New Mexico	10		16	128	287	106	28	22	13	5		95	68
New York	65	104	79	1,989	1,025	556	0	332	5	0	0	616	585
North Carolina	9	24		384	918	356		122	13			583	288
North Dakota	10	2	15	301	78	127	37	29	19	30		165	180
Ohio	27	34	12	1,136	5,563	897	662	366	17			605	691
Oklahoma	9	12	14	783	563	340	30	107	22	7	3	267	221
Oregon	6	19	32	934	827	207		78	57	2		183	164
Pennsylvania	15	74	115	3,100	1,835	605	18	414	38	19		617	1,162
Rhode Island	3	2	1	110	58	69	1	31	9			49	46
South Carolina	9	14	2	275	1,126	134	69	104	6	33	0	126	175
South Dakota	3	5	2	165	58	58		46	14	2	2	83	68
Tennessee	10	12	14	1,292	451	217	37	64	13	37		280	175
Texas	35	39	47	2,322	3,100	990	260	477	13	257		1,125	943
Utah	5	15	19	770	245	233	4	77	41	3	1	264	149
Vermont	6	2	3	26	55	19	3	18	6	1		32	8
Virginia	22	50	24	1,622	1,604	311	287	183	15	287		394	491
Washington	10	27	36	689	1,332	164	158	132	24	144	0	182	170
West Virginia	7	4	9	117	118	112		15	11			140	79
Wisconsin	8	25	235	1,469	417	210	412	22	2	112	110		218
Wyoming	5	5	1	111	49	40	3	14	9	2	1	37	27
U.S. service schools													
Canal Zone													
Guam												10	30
Puerto Rico	1	1		100	10	10		10					
Virgin Islands													

TOTAL PERSONNEL, STATE LEVEL, FISCAL YEAR 1966—TENTATIVE DATA

	Total, all occupational classifications	Persons serving all classifications	Agriculture		Distribution		Health		Home economics		Office		Technical		Trades and industry	
			Full time	Part time	Full time	Part time	Full time	Part time	Full time	Part time	Full time	Part time	Full time	Part time	Full time	Part time
Total	2,042	332	340	47	141	52	52	31	347	50	104	35	50	63	391	152
Alabama	65	1	16		2				10		3			6	17	23
Alaska	8	2		1		1			1	2		1			1	
Arizona	40	7	6		3	2		1	9		4	4	2	1	2	1
Arkansas	29	1	7	1	4	1	1		7	1	1				7	
California	75	12	11		5		1		10		4		3		29	
Colorado	19	4	3		1		1		3		2			1	4	0
Connecticut	32	12	3	2	1	1	1	1	2	1	1	1	4		6	
Delaware	18	3	1	2	1			1	4		1		2		3	
District of Columbia	6	2			1		1		1						1	
Florida	56	13	7		5		2	1	7		5		4		12	
Georgia	57	7	11		4		2	3	8		4			4	11	5
Hawaii	8	1	1		1				3		1				1	
Idaho	12	6	1	2		2	1	1	1	2		2		1		1
Illinois	67	9	12	11	0	10	1	0	5	0	0	7	2	0	10	0
Indiana	61	11	5		3	2	1		12	11	1				15	
Iowa	29	6	7		3	4	1	1	4		1	4		3		3
Kansas	28		9		4		1		7		1		1		5	
Kentucky	34	4	11		1		1		7		3		1		6	
Louisiana	45	7	12		7	2	1		6		2		1		7	
Maine	8	1	1			1	1		2			1			2	
Maryland	12	10	1	1	1				1	1	1		1	1	1	
Massachusetts	52	7	2	1	1		2		4	5	1			2	5	22
Michigan	44	9	6		1	1	1		4		2	1	1		19	
Minnesota	36	11	4	1	2	2	1		3	1	1			1	14	
Mississippi	37	9	12		2		1		4		1		1		6	1
Missouri	44	5	11	1	2	3	1		11	1	2	7	1		5	2
Montana																

Nebraska	17	2	4	4	1				2		1				2	
Nevada	13	5	1	1	1		1		1	1	1		1		2	
New Hampshire	19	2	2	1		1	1		2	2		1	1	1	3	2
New Jersey	34	21	1		2		2		3		2		2		1	
New Mexico	12	1	2			1	1		1	1	1			1	3	1
New York	173	23	9	4	3		1	3	32	3	5		3	13	25	49
North Carolina	69	8	16	1	7				19		2				16	
North Dakota	14	2	1	2		1		1	2			1			3	2
Ohio	112	9	16	5	12	0	1		16	9	7	1	1		35	
Oklahoma	60	11	9		2		2		6		2		4	12	4	8
Oregon	18	7	2		1		1	1	2		1			2	1	3
Pennsylvania	93	5	22	4	6		2	11	29		2		2	11	7	15
Rhode Island	11	4	1				1		1						4	1
South Carolina	48	3	9		3	9		1	7	1	3		4	1	6	4
South Dakota	14	1	2		1		1		3	1	1		1	1	3	1
Tennessee	62	22	5		6		3		7		3		1		15	
Texas	79	11	17		15		2		16		4		3		11	
Utah	10	2	1		1			1	2		1		1		1	
Vermont	14	2	2	1		1	1		3	1		1		1	2	1
Virginia	56	1	20		10	3	6		9		5	2				
Washington	0	2	9	0	3	2	1	1	5	6	2	0	1	0	5	0
West Virginia	14	1	4			1		1	10			1			3	1
Wisconsin	103	16	10		8		1	2	17		9		1		34	5
Wyoming	11	2	3	1	2				2		1					1
U.S. service schools:																
Canal Zone																
Guam																
Puerto Rico	64	9	12		2	1	1		14		9				16	
Virgin Islands																

TOTAL PERSONNEL, LOCAL LEVEL, FISCAL YEAR 1966—TENTATIVE DATA

	Total, all occupational classifications	Persons serving all classifications	Agriculture		Distribution		Health		Home economics		Office		Technical		Trades and Industry	
			Full time	Part time	Full time	Part time	Full time	Part time	Full time	Part time	Full time	Part time	Full time	Part time	Full time	Part time
Total	4,919	1,793	34	63	113	75	157	126	145	293	114	648	165	347	737	672
Alabama	101	45			1						1				54	
Alaska	4	3					1									
Arizona	8	1	1			1		1	2			1	1		3	
Arkansas	27							5				4			19	8
California	431	117	3		7		11	27	2		10	24	8	82	53	87
Colorado	20	20			1		2			3			1	8	3	2
Connecticut	58	6											12		46	
Delaware	5	5														
District of Columbia	9	9														
Florida	175	77	3		11		31		12		6		11		24	
Georgia	89	2			7	1	3		5					43	30	43
Hawaii	6		1						1	4						
Idaho	12	14							1							
Illinois	113	20	0	0	2	1	0	0	0	2	1	7	22	0	47	11
Indiana	58						9			3					12	34
Iowa	98	66						12	3					21		29
Kansas	41	19			1		4		3				2	6	1	5
Kentucky	29														29	
Louisiana	60	0			1				1		1		0		57	
Maine	6															6
Maryland	82	32		23		6	1	4	10	13	8	17		39	1	34
Massachusetts	802		2	16	1	26		13	7	173		434		41	30	59
Michigan	135	69			1	1	15		3	5	1	1	8	3	12	17
Minnesota	47	33	5	7		5			2		3				1	
Mississippi	14															14
Missouri	147	124			1				2	2		1			13	4

Montana																
Nebraska	28	11				6	3	2	4			5	2			7
Nevada	18	16											2	2	1	1
New Hampshire	3									2					1	
New Jersey	306	166	9	8	28	10	7	1	16	4	44	62	10	5	18	1[illegible]
New Mexico	7	6				1						1				1
New York	337	197	2						31				3		46	58
North Carolina	7	7														
North Dakota	10						3			2			1	1	1	2
Ohio	164	42	2	3	1	0	30	2	0	0	4	5	13	1	48	13
Oklahoma	38	9							1		1	1	7	19		
Oregon	99	75		4				1	1	3		5	1	3	1	5
Pennsylvania	356	113			4		3	33	7	17	19		4	36	41	79
Rhode Island	15	11													4	
South Carolina	46		0		0								30			16
South Dakota	16						4	1						4	6	1
Tennessee	69	37		2	3	4		4	1	12	1	6	3	1	15	6
Texas	172	37			18		8		19	11			6	13	28	32
Utah	43								1		2		8			32
Vermont	29	19				1	2	1		3		3		2	3	5
Virginia	38	1			15		15		5		3					
Washington	0	27	0	0	6	2	0	0	1	10	2	55	0	0	53	11
West Virginia	25	12	4		1		1	10			1					
Wisconsin	281	130	2		3	10	4	8	4	23	6	16	10	15	20	30
Wyoming	5							1		1				2	1	2
U.S. Service schools																
Canal Zone																
Guam																
Puerto Rico	230	215													15	
Virgin Islands																

Vocational, Technical, and Adult Education Research Programs, 1967–68

DIVISION OF ADULT AND VOCATIONAL RESEARCH, BUREAU OF RESEARCH, OFFICE OF EDUCATION

Discrimination Prohibited.—Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance." Therefore the Vocational, Technical, and Adult Education Research Program, like every other program or activity of the Department of Health, Education, and Welfare, must be operated in compliance with this law.

INTRODUCTION

The demand for education has been expanding rapidly in our dynamic economy. Total education expenditures have risen from $20.5 billion in 1955 to about $45 billion in 1965 and they are expected to rise to over $65 billion by 1975. The demand for higher education alone has increased disproportionately to the number of opportunities available. Whereas high school graduation was the standard of attainment for earlier generations, a college degree has now become the common goal for many students.

But for some, college need not and should not be a desired objective. Economic, intellectual, or other interests frequently militate against such an aspiration; many adults can find rewarding and fulfilling careers with less than a bachelor's degree. How to adapt the available resources to the needs of non-college-bound students is the legitimate concern of vocational educational research. Optimizing the opportunity for individual achievement in a modern free enterprise economy requires new curriculums, instructional methods, and motivational techniques. This is the purpose of the research and development efforts authorized by the Vocational Education Act of 1963. The basic objective of the Division of Adult and Vocational Research (DAVR) is to help nonprofessional persons of all ability levels and backgrounds, in school and out, to acquire the basic knowledge, occupational skills, and personal characteristics that will enable them to lead fully satisfying lives as economically self-sufficient individuals.

Recent shifts in the structure of the labor market have imposed increased demands upon public education to prepare young adults and experienced workers alike for changing work careers. The shift from production-oriented occupations to service occupations has accelerated the need for communicative and social skills in addition to the more familiar manipulative skills. Unfortunately, much of what is now taught in our schools fails to recognize this shift.

Through research and the support of innovative programs, a number of promising techniques and instructional materials have recently been identified, but much remains to be done. The magnitude of the job facing vocational educators can best be comprehended by examining the numbers of potential students for whom these programs are designed. Only 20 percent of our high school student population will complete a 4-year college program during their formal years of education. The remaining 80 percent are potential recipients of vocational education. In addition, about 18 million adults are enrolled in vocationally oriented programs in continuing education courses.

The dollar cost of not properly educating this major segment of our employed population can be measured in part by the outlay of funds for remedial programs sponsored by the Welfare Administration, the Office of Economic Opportunity, and the Office of Manpower Evaluation and Research. Because a healthy economy depends largely upon its ability to adapt to changes in its productive capacity and consumer markets, those currently employed or about to be employed need the same attention and educational services as those unemployed or out of school.

PURPOSE

Under the provisions of Public Law 88–210, the Office of Education has been charged with the responsibility of assisting the States to maintain, extend, and improve programs in vocational education and to develop new programs for people who need to acquire or upgrade their occupational skills. This Act authorizes Federal support for research, training programs, and demonstration or pilot programs to support the improvement and expansion of occupational education. The law places particular emphasis on vocational research and development related to the vocational education of young people from economically depressed communities who have academic, socioeconomic, or other handicaps that prevent them from succeeding in the regular vocational programs. Funds for adult and continuing education research also come from the Elementary and Secondary Education Act and related legislation.

To carry out the Division's research and development program, the DAVR has been organized into three branches:

The Employment Opportunities Branch concentrates on those Division programs which relate to economic and occupational information needed to plan, administer, and evaluate programs of adult and vocational education; to facilitate students' career choices; and to ease transitions from school to work and from job to job.

The Human Resources Branch focuses on the person prepared for or involved in the world of work—his career development, the relationship between a student's background, his family, his abilities and aptitudes, his motivations and aspirations, and his performance in school and on the job.

The Educational Resources Development Branch seeks to improve existing vocational programs and develop new programs and train the personnel to run them. This Branch promotes research, experimental, developmental, and pilot programs and evaluates their success in the field of curriculum development, instructional media and methods, organization, administration, teacher education, and facilities.

Two general classifications of research investments characterize the major thrust of this fiscal year's program. Institutional support activities provide assistance to universities or other groups with major research and development programs and permanent staffs. Individual project support comprises the second classification of research investment.

Figure 1 shows the flow of DAVR's functions from its legislatively defined "mission" stage, through program definition, development, implementation, dissemination, and finally program evaluation and revision.

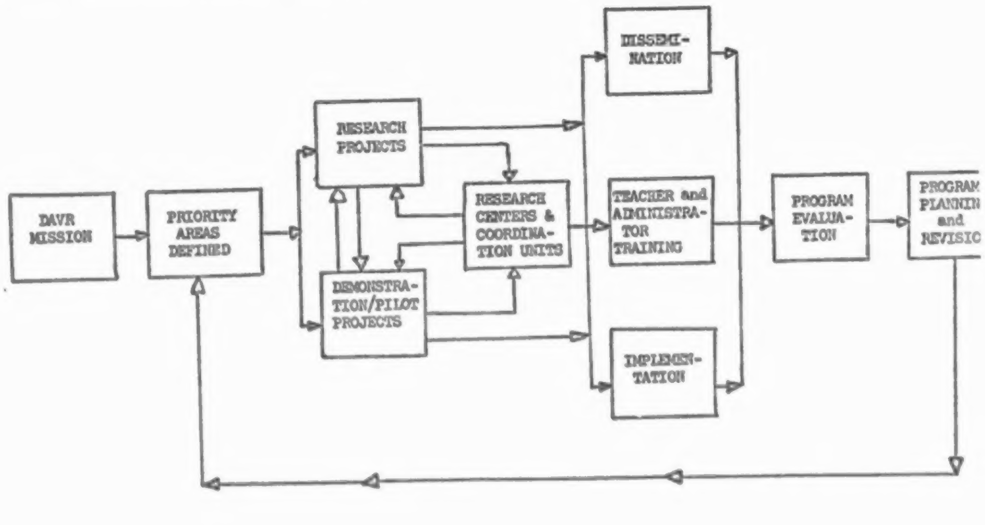

Figure 1. Functional flow chart of DAVR's principal activities.

INSTITUTIONAL SUPPORT ACTIVITIES

The institutional support activities of DAVR have focused primarily upon three program areas:

- Research Coordinating Units
- Teacher-Administrator Inservice Training Institutes
- Vocational Research Centers

Research coordinating units

The locus of vocational training is at the secondary or community college level, and research resources in these kinds of institutions have been very limited.

For this reason, DAVR has established Research Coordinating Units (RCU) in 44 States, in cooperation with the State departments of education. These Units are administratively located in universities and State departments of education and are required to assemble an interdisciplinary staff.

The general purpose of the RCU's is to stimulate, encourage, and coordinate research activities among State departments of education, universities, local school districts, and others with an interest in vocational and technical education. Although specific research activities vary with the research environment in each State, the following are indicative of the types of activities undertaken in most States:

- Establishment of a State Research Advisory Committee composed of representatives from colleges and universities, vocational schools, State department of education, local school districts, State employment service, business, industry, and labor.
- Inventory of research resources within the State, including the identification of individuals and organizations actually or potentially involved in vocational research.
- Review of State vocational programs and identification of outstanding problems amenable to research.
- Formulation of overall State research philosophy, establishment of research priorities, assignment of roles, and coordination of efforts.
- Dissemination of research information and findings through conferences, newsletters, and other media.
- Review of research proposals and provision of technical consultant services to local school district researchers and others.

The Research Coordinating Units marshal and develop the research resources in each State for the improvement of vocational education. Each unit is to be supported by the Office of Education for 3 years, with a gradual phase-out of Federal support in anticipation of full State and/or institutional support thereafter.

Teacher-administrator inservice training institutes

Insuring that the information gathered in the research and demonstration efforts is disseminated and implemented in the workshops and classrooms of the Nation's schools is another responsibility of DAVR. An important activity sponsored by the Division has been the support of vocational personnel training institutes around the country. These are programs designed to inform vocational teachers and administrators about the results of research efforts that are relevant to their problems. The subjects of the institutes may range from information about new occupational areas for which new curriculums and materials have been developed to innovational, educational technology which is applicable to vocational education. Teacher-administrator training institutes have contributed directly to the implementation of research findings at the local school level with minimum delay.

Vocational research centers

In order to insure that certain important research questions will be answered, two vocational research centers have been established. One of these is at North Carolina State University at Raleigh and the other is at Ohio State University, Columbus.

In the planning and operation of the Centers, provision is made for serving not only the broad comprehensive needs of the total vocational and technical education program but also the unique needs of specific and related vocational services. The objectives of the Centers include stimulating and strengthening State, regional, and national programs of applied research and development directed toward the solution of pressing problems in vocational and tecehnical education; encouraging the development of research to improve vocational and technical education in institutions of higher education and other appropriate settings; conducting research studies directed toward the development of new knowledge and new applications of existing knowledge in vocational and technical education; and upgrading vocational education leadership (State supervisors, teacher educators, research specialists, and others) through advanced study and inservice education programs.

The "center" concept provides a means to catalyze and energize the essential resources needed to effect major improvement in vocational and technical education. In addition to its research contributions, the Ohio State University Center also provides a national information retrieval and dissemination system, contributing to the rapid and effective utilization of research results and tested innovations.

INDIVIDUAL PROJECT SUPPORT ACTIVITIES

The largest share of DAVR's efforts has been the sponsorship of individual research projects. All of the projects are planned to improve vocational education, and they vary widely in the particular problems to which they are directed. (Lists of past and current projects are available from DAVR.) In order to insure the relevance of the individual projects to current and pressing needs in vocational education, DAVR and its Advisory Council have defined specific priority areas for fiscal year 1967-68. These five priority areas area:

Program Evaluation
Vocational Education Curriculums
Vocational Education Resources Development
Vocational Guidance and Career Choice Processes
Adult and Continuing Education

Most of the current individual projects supported by DAVR fall into one or more of these priority areas, which are discussed in detail below.

Program evaluation

An important responsibility shared by DAVR with other Government agencies is the evaluation of vocational education's effectiveness in meeting the needs of the Nation's young people. A well and appropriately trained manpower is society's greatest resource. To insure that this resource is optimally developed requires continuing evaluation and information feedback to educational decision-makers. Particular emphasis will be placed on individual projects designed to provide this kind of information. In addition to these broad requirements, attention will be given to projects which may be described as follows:

- Where valid evaluation procedures and techniques have not yet been developed, or where there is reason to believe that better or cheaper evaluation methods are needed and feasible. DAVR will finance research projects designed to developed new and innovative approaches.
- Where new promising teacher training, curriculum, administrative, or other innovative programs have been developed, DAVR will finance projects for their assessment. Projects for the purpose of evaluating the effectiveness and potential for replication elsewhere of successful innovative programs will also be supported.
- DAVR will support projects designed to evaluate the dissemination procedures by which new and innovative approaches to vocational education are transformed into educational practice.
- DAVR's entire research and development program will be evaluated on a continuing basis to provide the information necessary for helping to set priorities for each coming year's activities. This evaluation procedure is necessary in order to measure performance against the goals set and to bolster the weaker aspects of the program as well as to determine when an element in the plan has been accomplished which can free resources for a new priority.

Vocational education curriculums

The need for substantial changes in occupational training in the public schools is evident. Vocational education curriculums are needed which will (1) provide occupational skill training for nearly 8 times the number of students who now receive it, and (2) insure that the training is adaptive, up to date, and relates to existing and future job requirements. A conclusion supported by several comprehensive studies indicates that these aims are not being completely met with vocational curriculums in the Nation's schools today.

The first step in building new vocational curriculums is to look at those behavioral requirements needed for entry into a variety of activities after one leaves school. These behavioral requirements should be stated specifically and in measurable terms. Following the lead of the systems analyst, one should describe as precisely as possible the specifications of the desired end product. What are the ingredients of a high school program which will assure the attainment of these specifications? New vocational curriculums will likely include academic as well as occupational training but may also include such components as personal development, real work experience, and post-high school placement functions. Even the avocational or school-sponsored recreation or social programs may be considered an integral component of this system. Each of these components and subparts must be defined in terms of its contribution to the attainment of the specified behavioral objective. This process permits empirical validation of the teaching effectiveness of the program.

Curriculums must be developed so that each component activity relates logically to all other activities and leads to the efficient attainment of the behavioral objectives. The characteristics of this system should include the following:

- It will permit maximum flexibility of post-high school activity options.
- Each student should receive broad educational training in any single track within the system.
- It will utilize appropriate self-paced and self-instructional technology and maximally accommodate individual differences in learning rates.
- It will allow each student to succeed in his learning experience.
- It will be interesting, challenging, and intrinsically motivating to each student.
- It should be capable of being implemented or adapted to many different school systems.
- It will lead efficiently and effectively to the attainment of specific behavioral objectives.
- It should be, in the implementation stages, cost effective.

While content and structure are difficult to state meaningfully without a great deal more specificity, the following is an attempt to state several objectives of such curriculums. New curriculums should:

- Emphasize the articulation between academic and vocational learning for the purpose of fusing the two programs. By employing vocational preparation as the principal vehicle, the inculcation of basic learning skills could be made more palatable to many students who otherwise have difficulty seeing the value of a general education.
- Expose the student to an understanding of the "real world" through a series of experiences which capitalize on the universal desire of youth to investigate for himself. Abstract, verbal principles would be acquired through nonverbal stimuli, such as seeing, feeling, manipulating, and even smelling.
- Develop a core of generalizable skills related to a cluster of occupations rather than just those related to one specialized occupation.
- Orient students to the attitudes and habits which are associated with successful job performance.
- Provide a background for the prospective worker by helping him to understand how he fits within the economic and civic institutions of our country.
- Make students aware that learning is life-oriented and need not, indeed must not, stop with his exit from formal education.
- Help students cope with a changing labor market through developing their problem-solving ability and career strategies which can lead to an adequate level of income and responsibility.
- Create within the student a sense of self-reliance and awareness which leads him to seek out appropriate careers with realistic aspiration levels.

The following are representative of the kinds of curriculum research and development efforts which will be supported by DAVR:

- A design for teaching generalizable occupational concepts rather than narrow vocational skills subject to obsolescence.
- A study of the relationship of flexible scheduling, self-instructional methods, and new educational technology as applied to occupational training.
- The development and cataloging of measurable behavioral objectives for occupational training.
- The design and validation of assessment instruments for measuring attainment of behavioral objectives.
- The development and testing of packages of curriculum materials, for both teachers and high school and post-high school students, for clusters of occupations for which limited training opportunities have been available. Clusters of occupations for which curriculum development and training are needed are:
    - Occupations related to recreation
    - Health occupations
    - Services-to-people occupations—welfare, household employment, services and care of the elderly
    - Occupations in the communications field
    - Transportation and related occupations

Office occupations related to changing technology
Teaching assistants
Public service occupations
Mid-management and occupations related to distribution and marketing
Skilled tradesmen and craftsmen, service specialists

- The development and testing of curriculum materials for teachers and students for offering prevocational orientation to the world of work experiences for all junior high school students, recognizing differences in life patterns of boys and girls.
- The development of curriculum materials and experimentation with new approaches and media for: (a) bringing about desired changes in youth of personal qualities needed for effective adjustment to the world of work, (b) preparing girls for their dual role of home manager and wage earner with accompanying education for boys relative to the changing roles of men and women in today's society, particularly those from disadvantaged backgrounds.
- A study of the contribution which participation in youth organizations related to vocational programs may make to personal development and leadership competence of all students, particularly those who are disadvantaged.
- The design of instructional elements and components of a systems curriculum, integrating general and vocational education.
- The measurement of the effect of work-study experience and placement on the learning process and motivation of vocational students.

Vocational education resources development

Accelerated technological change, a rapid expansion of the service industries, and an expanded vocational education program at the secondary and post-secondary levels have increased the demand for vocational and technical teachers. New area vocational schools are being built; many high schools and community colleges are adding vocational and technical courses. In order to carry out the intent of Congress, that high quality and realistic vocational training or retraining should be made accessible to all desiring to take advantage of it, high priority must be given to recruiting and developing competent vocational personnel. Thus, one of DAVR's goals is to assist in developing (1) an adequate supply of personnel needed to staff new programs of vocational-technical education and (2) procedures to permit the upgrading of present personnel.

Studies are needed which relate to the determination of the numbers, qualifications, and sources of persons required to staff current and projected vocational programs. Moreover, research is needed to determine what vocational teachers should be taught and how teacher preparation programs should be organized at our Nation's colleges and universities.

The development of experimental programs for training new and current personnel is required. This should include the training not only of vocational teachers and counselors but school administrators and related vocational-technical-adult education personnel as well.

There is a need to investigate through research the possibility of using untapped resources for vocational instructors (e.g., retired military and industrial personnel) to find means of bringing them into the educational framework.

Research should also consider the feasibility of converting effective industrial technicians, managers, and other qualified persons into teachers to help reduce the existing and projected vocational teacher shortage and to help bridge the gap between the classroom and work.

In addition to developing vocational education resources, attention should be directed to the improvement of existing organizational structures of vocational education at State and local levels. Urgently needed is research relating to identification of factors which influence change such as State boards for vocational education; advisory groups; appropriate groups to formalize State plans, match funds, and establish other patterns of organization which facilitate the rapid adaptation of program activities. Successful local, State, and regional programs and their related organizational structures need to be identified and communicated elsewhere. Organizational and administrative patterns of vocational education programs already in existence need to be evaluated. Recent trends in general education such as ungraded schools, team teaching, flexible scheduling ,and individualized instruction need to be adapted to the purposes of vocational education.

Vocational guidance and career choice processes

For the student, learning to make appropriate career decisions is an important part of his educational experience. From his work each individual derives not only his income but also many of his personal satisfactions and his status in the social groups with which he comes in contact. To help vocational guidance counselors prepare the individual for his role in society as an employed adult, and to help him grow both as a person and as a member of the society in which he lives, research must be undertaken to find out more about how concepts of work are formed, how individuals are motivated in work-related situations, and how individual satisfactions are achieved. Additional information is needed about the relationship of motivations, aspirations, and ability levels to one another and to external variables, such as job opportunities, occupational requirements, and training programs and their costs in time, effort, and financial expense. Emerging occupational fields should be identified and analyzed for content, employment requirements, and other important characteristics. The following research questions suggest the kind of information that is needed and can be achieved through a carefully planned long-range research program:

- What specific behavior characterizes satisfactory career development?
- What is the place of occupational information and career decision-making in the curriculum?
- Is vocational guidance a necessary or desirable isolated activity or should it be incorporated in other subject matter?
- What values can and should be taught in schools?
- What are the respective roles of the counselor and the teacher in vocational guidance?
- How can adequate, accurate, up-to-date, occupational information be procured and provided?
- What are the occupational role models for children?
- How do we resolve the problem of the future orientation of education and guidance versus the new orientation of the students?
- What new educational techniques, procedures, and plans can be developed and employed effectively in the area of vocational guidance?
- What can be done about the inadequate state of career development theory?
- Can readiness levels for occupational information be established?
- What are the career patterns of women?
- What are possible sources of satisfaction in various jobs?
- What is being done in the curriculum to teach occupational material and career decision-making?

Adult and continuing education

The periodic shifts characteristic of today's labor market, the necessity for frequent redeployment of portions of the labor force from old to new types of occupations, the large-scale efforts to improve the socioeconomic status of disadvantaged segments of the population, and the increased leisure time available to many have combined to create unprecedented demands for a variety of adult and continuing education programs.

Adult and continuing education programs are defined as educational activities outside the traditional and sequential education system. The adult's overall purpose in engaging in these activities is to continue to grow as an individual and as a contributing member of society. His participation is usually voluntary and most of his activity is self-directed. He may seek learning solely for personal growth or as a means of entry and advancement in his work. In this latter case, his purpose would be to learn an employable skill or a useful art along with the related instruction which makes it meaningful, or he might be seeking to upgrade and improve his practice of such a skill or art and broaden his background of knowledge.

Although the demand for a wide variety of adult and continuing education programs is increasing, the systematic initiation and development of improved offerings is seriously hampered by the dearth of research in this field. The broad area of adult and continuing education is one which has been relatively unexplored in terms of research and development.

A well-conceived research and development program in adult and continuing education must aim at developing new knowledge concerning the process of educating adults and developing new applications of existing knowledge about this process. As a starting point, the content, quality, and extent of ongoing programs for adults in relation to the goals of education in our society must be assessed. Beyond this, specific attention should be directed to certain problem areas which might be grouped into three categories: (1) those dealing with the participants themselves, (2) those dealing with the process of educating adults, and (3) those dealing with the content of adult education.

SUBMISSION OF PROPOSALS

Proposals for adult and vocational education projects should be prepared and submitted in accordance with *Office of Education Support for Research and Related Activities*. Copies may be obtained upon request from the:

Bureau of Research
U.S. Office of Education
400 Maryland Avenue, SW.
Washington, D.C. 20202

Grants for the support of projects under $10,000 will be administered through the OE regional offices. Application and administration procedures have been developed, and are contained in the publication *Small Project Research*, available upon request from the regional offices.

ADDITIONAL INFORMATION

The following are available upon request from the Division of Adult and Vocational Research, U.S. Office of Education, 400 Maryland Avenue, SW., Washington, D.C. 20202.

Adult and Vocational Research, Training, and Experimental Programs
DAVR Research and Development Activities in New Occupational Fields
Guidelines for Research and Development in Adult and Continuing Education
Guidelines for Submitting Proposals To Conduct Training Programs for Vocational and Technical Education Personnel
Subprofessional Job Development in the Mental Health Field
Support for Research Programs in the Health Fields

DISTRIBUTION OF FEDERAL SUPPORT GRANTED FOR PROJECTS, BY STATE AND FISCAL YEAR, FISCAL YEAR 1965-67, DAVR

State	Federal dollars granted			
	Fiscal year 1965	Fiscal year 1966	Fiscal year 1967	Total
Alabama	88, 421	79, 039	26, 947	194, 407
Alaska				
Arizona	100, 000	75, 038	88, 813	263, 851
Arkansas	9, 328	41, 547		50, 875
California	846, 597	3, 447, 224	451, 654	4, 745, 475
Colorado	228, 539	465, 100	81, 150	774, 789
Connecticut	456, 309	76, 000	340, 545	872, 854
Delaware	22, 782	60, 000		82, 782
District of Columbia	183, 514	583, 235	305, 980	1, 072, 729
Florida	319, 163	351, 959	443, 573	1, 114, 695
Georgia	24, 479	215, 352	124, 860	364, 691
Hawaii		46, 132		46, 132
Idaho	97, 638	6, 116	91, 426	195, 180
Illinois	608, 741	698, 515	480, 938	1, 788, 194
Indiana		222, 187	22, 000	244, 187
Iowa	380, 380	77, 818	296, 318	754, 516
Kansas	75, 660	211, 462	13, 080	300, 202
Kentucky	133, 729	67, 617	193, 886	395, 286
Louisiana	52, 915	135, 974		188, 889
Maine				
Maryland	7, 533	258, 590	190, 191	456, 314
Massachusetts	167, 675	485, 794	435, 000	1, 088, 469
Michigan	402, 872	769, 668	594, 055	1, 766, 595
Minnesota	164, 712	827, 457	214, 557	1, 206, 726
Mississippi	92, 727		104, 963	197, 690
Missouri	98, 323	275, 872	16, 234	390, 429
Montana	72, 789	26, 276	68, 531	167, 596
Nebraska	176, 679	125, 626	183, 306	485, 611
Nevada		118, 258	25, 237	143, 495
New Hampshire		75, 289		75, 289
New Jersey	90, 205	224, 616	183, 342	498, 163
New Mexico	72, 559	21, 397	85, 831	179, 777
New York	1, 014, 638	2, 651, 894	595, 128	4, 261, 660
North Carolina	400, 022	254, 558	927, 239	1, 581, 819
North Dakota	103, 078	1, 500	125, 740	230, 318
Ohio	1, 009, 174	839, 044	1, 391, 343	3, 239, 561
Oklahoma	190, 658	183, 203	178, 018	551, 879
Oregon	532, 421	97, 739	183, 319	813, 479
Pennsylvania	829, 661	1, 289, 110	435, 464	2, 554, 235
Rhode Island	12, 000	206, 282	117, 589	335, 871
South Carolina	16, 711	76, 770		93, 481
South Dakota				
Tennessee	8, 449	335, 879	40, 750	385, 078
Texas	313, 804	315, 032	166, 902	795, 738
Utah	79, 871		96, 451	176, 322
Vermont				
Virginia		94, 200	23, 750	117, 950
Washington	386, 844	71, 514	225, 000	683, 358
West Virginia	9, 000	46, 090		55, 090
Wisconsin	377, 035	668, 528	430, 890	1, 476, 453
Wyoming		82, 060		82, 060
Guam				
Puerto Rico				
Virgin Islands				
Total	10, 257, 635	17, 282, 605	10, 000, 000	37, 540, 240

SUPPLEMENTARY DATA

A summary on school dropouts has just been released by the National Education Association. It contains the following statistics on school dropouts by State and Region:

PUBLIC HIGH SCHOOL GRADUATES IN 1965-66 AS A PERCENT OF 9TH GRADERS IN FALL, 1962

State (1)	High School graduates, 1965-66 (2)	9th graders, fall, 1962 (3)	Graduates as percent of 9th graders 4 years earlier (4)	Percent not graduating (5)
Total, U.S. (including District of Columbia)	2,356,920	[1] 3,050,890	77.3	22.7
New England	122,428	156,028	78.5	21.5
Connecticut	30,611	38,057	80.4	19.6
Maine	[2] 12,271	15,979	76.8	23.2
Massachusetts	[3] 58,500	75,647	77.3	22.7
New Hampshire	7,545	9,849	76.6	23.4
Rhode Island	8,814	10,606	83.1	16.9
Vermont	4,687	5,890	79.6	20.4
Mideast	440,831	378,567	[4] 79.7	20.3
Delaware	5,952	7,515	79.2	20.8
Maryland	41,583	53,525	77.7	22.3
New Jersey	76,000	92,021	82.6	17.4
New York	173,224	218,254	79.4	20.6
Pennsylvania	138,970	(5)	----	----
District of Columbia	[6] 5,102	7,252	70.4	29.6
Southeast	509,705	747,309	68.2	31.8
Alabama	44,160	68,209	64.7	35.3
Arkansas	24,976	36,350	68.7	31.3
Florida	62,222	86,792	71.7	28.3
Georgia	51,842	79,590	65.1	34.9
Kentucky	34,738	53,344	65.1	34.9
Louisiana	39,722	58,500	67.9	32.1
Mississippi	27,926	42,927	65.1	34.9
North Carolina	66,187	98,283	67.3	32.7
South Carolina	33,539	47,894	70.0	30.0
Tennessee	45,803	67,399	68.0	32.0
Virginia	52,417	70,075	74.8	25.2
West Virginia	26,173	37,946	69.0	31.0
Great Lakes	476,704	590,789	80.7	19.3
Illinois	120,246	147,882	81.3	22.1
Indiana	64,024	82,142	77.9	18.7
Michigan	106,000	131,078	80.9	19.1
Ohio	130,751	164,578	79.4	20.6
Wisconsin	[3] 55,683	65,109	85.5	14.5

See footnotes at end of table.

PUBLIC HIGH SCHOOL GRADUATES IN 1965-66 AS A PERCENT OF 9TH GRADERS IN FALL, 1962—Continued

State (1)	High School graduates, 1965-66 (2)	9th graders, fall, 1962 (3)	Graduates as percent of 9th graders 4 years earlier (4)	Percent not graduating (5)
Plains	212,683	256,364	83.0	17.0
Iowa	[7] 40,000	45,492	87.9	12.1
Kansas	[3, 8] 30,604	35,472	86.3	13.7
Minnesota	52,500	58,211	90.2	9.8
Missouri	50,200	70,763	70.9	29.1
Nebraska	19,590	23,088	84.8	15.2
North Dakota	9,421	11,219	84.0	16.0
South Dakota	10,368	12,119	85.6	14.4
Southwest	189,398	245,350	[9] 71.4	28.6
Arizona	18,877	27,954	67.5	32.5
New Mexico	14,146	(5)	----------	----------
Oklahoma	34,580	48,400	71.4	28.6
Texas	121,795	168,996	72.1	27.9
Rocky Mountains	69,957	85,510	81.8	18.2
Colorado	27,555	32,723	84.2	15.8
Idaho	11,098	13,896	79.9	20.1
Montana	[10] 10,000	13,085	76.4	23.6
Utah	16,132	19,292	83.6	16.4
Wyoming	5,172	6,514	79.4	20.6
Far West	323,807	368,179	87.9	12.1
California	245,000	275,000	89.1	10.9
Nevada	4,620	5,700	81.1	18.9
Oregon	28,387	34,011	83.5	16.5
Washington	45,800	53,468	85.7	14.3
Alaska	2,419	3,330	72.6	27.4
Hawaii	8,988	10,633	84.5	15.5

[1] Includes estimates for nonreporting States (Pennsylvania and New Mexico).
[2] Excludes pupils attending publicly supported private academies and out-of-State schools.
[3] Excludes vocational schools not operated as part of the regular school system.
[4] Excludes Pennsylvania.
[5] Not available.
[6] Includes graduates from vocational high schools, Capitol Page School, etc.
[7] Estimated by NEA Research Division.
[8] Revised from original figures.
[9] Excludes New Mexico.
[10] Estimated by NEA Research Division and confirmed by Montana Education Association.

89th Congress }
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JOINT COMMITTEE PRINT

AUTOMATION AND TECHNOLOGY IN EDUCATION

A REPORT

OF THE

SUBCOMMITTEE ON ECONOMIC PROGRESS

OF THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

AUGUST 1966

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LETTER OF TRANSMITTAL

AUGUST 9, 1966.

To the Members of the Joint Economic Committee:

Transmitted herewith for your consideration and use and for the use of other Members of Congress and other interested parties, is a report entitled "Automation and Technology in Education," prepared by the Subcommittee on Economic Progress.

The report is an outgrowth of hearings which the subcommittee held in June as part of its broad study of investment in human resources. The Joint Economic Committee has pioneered in assessing the effects of automation on our society, and it is only fitting that current efforts be devoted to appraising the effects of automation on the vital field of education. The fact is that developments in the storage, processing, and communication of information arising from the new technologies are creating the prospect of a revolution in our system of education. Moreover, it makes it possible to reduce drastically adult illiteracy and low earning power caused by inadequate education, thus aiding the war on poverty.

The movement is in its early stages and there are many problems that will have to be resolved before our society can take full advantage of the new technology for educational purposes. This report has been prepared in the hope that it will serve to point up recent developments and delineate some of the current issues in this field.

Sincerely,

WRIGHT PATMAN,
Chairman, Joint Economic Committee.

AUTOMATION AND TECHNOLOGY IN EDUCATION

INTRODUCTION

The Nation has long recognized the great importance of universal education and rapid technological advance both to the health of our free political institutions and to the prosperity and growth of our economy. Only recently has it become obvious, even to experts, that these two forces in American life are merging. Developments in the storage, processing, and communication of information arising from the new technologies are creating the prospect of a complete revolution in our system of education, both public and private.

The Federal Government's activities in the fields of training and education have expanded appreciably in the past few years. The Federal budget contains substantial aid for scientific and technological education and provides extensive support to schools at all levels. The poverty program has added to the demands on our educational resources: success of the Youth Corps, the Job Corps, and the adult basic training programs, particularly, depends primarily on learning.

In his message of March 1, the President characterized the education of our people as a national investment and set for the future the goal of full education for every citizen up to the limits of his capacity to absorb it. The President has proposed for the coming year a total Federal investment in education and training of over $10 billion. Among the elements in the program are the adoption of special educational aids for approximately 12 million children who are handicapped physically or culturally; elimination of illiteracy within a decade; reduction by half in the number of school dropouts; provision of public library services to 15 million Americans who do not now have them; guaranteed opportunities for higher education on the basis of ability to learn; and construction of facilities needed to take care of 9 million college students by 1975. In addition, the President has recommended to the Congress expansion of the Headstart program for preschool children; strengthening of the Elementary and Secondary Education Act of 1965; expansion of Federal assistance in higher education; and improvement of the Nation's libraries. That a predominantly bipartisan effort in the Congress has resulted in an expansion of these programs is indicative of the national concern and support for educational growth and modernization of our educational plant.

The National Commission on Automation, Technology, and Economic Progress observed, in its recent report, that unemployment tends to be concentrated among those workers with little education—"not primarily because technological developments are changing the nature of jobs, but because the uneducated are at the 'back of the line' in the competition for jobs." In this connection, the Commission stated that "adequate educational opportunities should be available to all" in order to facilitate adjustments to change, as well as to improve the quality of life. Recommendations in the report include compensatory education for those from disadvantaged environments, improvements in the general quality of education, universal high school education and opportunity for 14 years of free public education, elimination of financial obstacles to higher education, lifetime opportunities for education, training, retraining, and special attention to the handicaps of adults with deficient basic education.

The Employment Act of 1946 directs the Joint Economic Committee to make continuing studies of matters relating to employment, production, and purchasing power. In the course of its many studies since the act was passed, the committee has periodically examined the effects of automation on the performance and development of our economy, particularly its implication for production and manpower. Recently many applications of automation have focused on the communication of information and its measurement, translation, and retrieval. In line with this new trend, a substantial amount of business investment and resources has been devoted to the possibilities of applying technological innovations to the rapidly expanding requirements of education.

This convergence of expanding demands on our educational system and the dramatic breakthroughs in the field of communications technology during the past decade has far-reaching implications for the economy. For this reason, the Subcommittee on Economic Progress devoted 3 days of hearings to the subject early in June 1966. Eight witnesses were heard, representing the industries engaged in developing new technology for education; experts in the field of educational research; and officials of Federal, State, and local government. The hearings served to highlight the challenge of educational requirements for public policy, as well as our great need for coordination and imagination in adapting our skills and knowledge to the expansion and improvement of learning.

This report is necessarily selective in its review of issues which were raised in the hearings. In addition to providing greater detail concerning some topics discussed here, the record of the hearings—published in a separate volume—deals with other recent or prospective developments in automation and technology as they affect education.

DIMENSIONS OF EDUCATIONAL NEEDS

Expenditures on education constitute a significant part of our gross national product—approximately 6 percent. Moreover, they are growing rapidly. Direct expenditures for formal education in elementary schools, high schools, and colleges increased from approximately $18 billion a year in 1955 to a current level close to $40 billion. By 1975, these outlays are expected to increase by another 50 percent, reaching $60 billion a year (in 1963–64 dollars). The rise is caused mainly by increases in enrollment at all levels of education, especially high schools and colleges, and rising costs, including, of course, teachers' salaries.

Tables indicating anticipated increases in expenditures for education by level of instruction and the increases in enrollments through 1975 are included in the record of the hearings in the Appendix (pp. 209–225). These tables were prepared by the Office of Education, Department of Health, Education, and Welfare, and published as part of its projections of educational statistics to 1974–75.

According to the Office of Education analyses, annual current expenditures per pupil in public elementary and secondary schools increased from $321 per pupil in the school year 1954–55 to $478 in 1964–65, and are expected to increase to $660 by 1974–75. Figures are in 1963–64 dollars.

The annual cost per student in institutions of higher learning rose from $881 in 1954–55 to $1,220 in 1964–65, and is expected to climb to $1,537 by 1974–75. These costs also are expressed in 1963–64 dollars. They relate only to education expenses, omitting auxiliary items, organized research, and other related activities of the institutions.

Total enrollment in U.S. educational institutions rose from 36 million in 1954 to 53 million in 1964 and is expected to be 63 million by 1974. This total covers regular public and nonpublic elementary and secondary schools and degree credit enrollments in institutions of higher learning, but does not include private vocational schools or enrollment in noncredit courses at institutions of higher learning.

FEDERAL GOVERNMENT ROLE

An appreciable part of the Federal budget is devoted to education. As is evident in tables in *Special Analysis G of the Federal Budget for 1967*, these expenditures are reflected throughout the spectrum of Government functions. Expenditures from Federal budget and trust funds for education, training, and related programs were $5.2 billion in fiscal year 1965. They were estimated to rise to $8.4 billion in the current fiscal year—nearly 6 percent of all budget and trust fund expenditures.

During 1964–65, four-fifths of all U.S. outlays for education were financed through governmental budgets, local, State, and Federal. Major responsibility for public financing of education has rested traditionally on local governments, but the States and the Federal Government have increased their contributions substantially in recent years. The Federal Government provided 11.5 percent and State and local governments financed from their own revenues 68.5 percent of all educational expenditures in 1964–65. The rest was private expenditure by institutions, organizations, and individuals.

The Office of Education's projections suggest that the public share of the national total will recede slightly, to about 77 percent, and the nonpublic share will rise to 23 percent over the next decade.

If recent trends in governmental financing continue, the Federal Government is likely to be financing in 1975 significantly more than its present 11.5 percent share of all U.S. educational expenditures. But even if the Federal share remains unchanged, this portion of the $60.9 billion total estimated for 1975 would add some $2.6 billion a year to Federal Government expenditures (in 1963–64 dollars).

RESEARCH AND DEVELOPMENT

It has been said that even now, when we are in the midst of the current "knowledge explosion," the education "industry" of this country devotes less than 1 percent of its annual outlays to research and development. An industrialist, who is also a school board president, has been quoted as saying, "The aircraft industry would go out of business in 2 years if it changed as slowly as education."

Dr. Richard Louis Bright, Associate Commissioner of Education for Research, was among the witnesses heard by the subcommittee. He has reported, in a recent article, the estimates of some experts that there is a 30-year lag between innovation in education and widespread adoption of the innovation. In fact, Dr. Bright noted, it takes about 15 years for the first 3 percent of school districts to make any given change.

"This," he said, "is a tragic truth in a time when education has come to be regarded as the heart of our society; tragic in a time when, for instance, innovation in medicine takes only 2 years to be universally adopted."

The Elementary and Secondary Education Act which the Congress enacted in 1965 has added a great new impetus to the invention and adoption of new techniques and new ideas for improving the productivity of educational processes and programs. The Higher Education Act of 1965 provides increased assistance for postsecondary education. Yet it appears that only the initial steps have been taken in this direction and that there remains a long and tortuous path from the research and development which produces valid new techniques to their effective general application in the learning process.

Prospective Demands in Relation to Capacity

The Office of Education's projections of aggregate educational outlays appear to be minimal. They do not take account of the need for great qualitative improvements. They provide for some reduction of the number of overcrowded or unsatisfactory public school classrooms but not for the full correction of such substandard conditions. They assume the continued use of many facilities which already are obsolete or inefficient or will become so during the next decade.

Moreover, the amount of knowledge to be communicated during the process of education is increasing in geometric progressions year after year. There have been estimates that as much technical knowledge will be developed in the next 30 years as has been accumulated in the entire past history of mankind. In this country alone, we produce approximately 25,000 technical papers every week, along with 400 books and 3,500 articles. Added to these rapidly growing demands on our educational system is the impetus of the civil rights quest, which devolves in considerable measure, on the schools.

Facing such prospective requirements, our educational system is threatened by a decline in relative effectiveness unless improved productivity can be brought to its aid. The majority of the witnesses before the committee expressed concern that it will not be possible to meet the rapidly increasing demands and to expand our educational enterprises adequately by traditional approaches—e.g., conventional buildings and facilities, traditional methods of utilizing teachers and other personnel, and existing organizational structure.

Technological Innovations

From such considerations springs the enthusiasm and the high expectations which most of the witnesses expressed for the application of rapidly developing communications technology—a technology which appears to offer to educators many useful devices and combinations of devices. At the same time, these witnesses raised questions and emphasized the need for cautious appraisal—including most especially the clear definition of the objectives of educational efforts and evaluation of proposed innovations in the light of those objectives.

It seems clear that rapid and effective application of these devices and new techniques will require important adjustments within the educational system. The role of teachers and other educational personnel may be altered. Application of the new technology will require much more specific planning for the teacher-pupil relationship, with some departures from past dependence on improvisations and intuitive insights. It could result in a considerable rise in the proportionate importance of capital equipment employed in the national educational enterprise; and this, in turn, could have significant implications for the economical and efficient size of school attendance areas and administrative districts, and the financing of education.

Acceptance of such changes presupposes careful assessments of social and economic benefits and disadvantages associated with each proposed innovation. It requires clear demonstrations that the benefits of particular changes exceed their costs, both direct and indirect. Among costs and benefits to be considered are the possibilities that adaptations to future changes in educational requirements may be either hindered or facilitated by each current commitment.

KINDS OF EQUIPMENT

The technological aids that were brought to the committee's attention include educational television, both open and closed; video tape; computerized instruction; the use of computers for student testing, guidance, and evaluation, and the storage, retrieval, and distribution of information; programed courses of instruction, teaching machines, particularly the "talking typewriter"; the use of microfilm and microfilm viewing equipment; and language laboratories. Also stressed was the "systems" approach to the development and utilization of educational technology. By this is meant the creative combination of a variety of skills and devices to produce desired results, an approach that is proving highly successful in the military sphere.

It was pointed out that computers can provide lessons tailored to individual needs so that the student can control the speed of presentation in accordance with his own progress. The presentation can be in written form, through pictures, either moving or still, by voice, or by various combinations of these. Likewise, the student responses can be made by typewriter keyboard, by pressing buttons, or by simply pointing a wand at a tube.

It is possible, through the computer, to provide students and teachers with a record of progress at any point in a course of instruction. It is also possible for the teacher to get analytical reports on the progress of students, so as to show areas of difficulty and rates of progress. Students can simulate the real decision-making process, such as running a business or a legislature. Perhaps one of the most exciting prospective uses is the possibility of establishing centers of information which a student could reach by a telephonic device and receive a lesson or a formula, see a film, or obtain language instruction; in other words, obtain information in almost any form and in various media. The so-called talking typewriter, which some experts regard as impressively effective in teaching children to read, combines sight, sound, and touch in one device. Copying machines are proving very useful as an educational aid. Video tape, though still relatively expensive, makes it possible for groups to view themselves and analyze their performances. The use of film cartridges in individual projectors, particularly, could be an aid in biology where it would be possible to see growth speeded up, or in physics where events may be slowed down to permit study. In addition to teaching possibilites, computers will become increasingly necessary in the administration and recordkeeping of schools and in the management of libraries.

A majority of the witnesses heard by the subcommittee were of the opinion that technological teaching aids, properly used, can help substantially to improve both the quality and quantity of education. They can do so by providing more flexibility in both the organization and the operation of schools and permitting each student to realize more fully his unique talents and capacity. They also serve to relieve teachers of much of the drudgery and drill that is now part of the educational scene, and permit them to give more time and talent to those teaching responsibilities and on-the-spot complications that require personal attention to individual pupils.

Automation is expected to help particularly those students engaged in independent study because it makes it possible to receive programed instruction when and where it is needed. This prospect increases greatly the opportunities for continuing education throughout the adult years. As one of the witnesses stated, it will

> make possible, from the standpoint of personal facilities, cost, and convenience, the magnitude, the diversity, and the quality of education that will be demanded and required by a society that is fast becoming a continuous learning society, and thus expand educational opportunities—downward, upward, and throughout the age range of our population.

In summary, it may be said that technology makes it possible to convey information in a far more flexible and, potentially at least, effective way than can be managed by an overburdened teacher, standing in front of the classroom. However, there is one big proviso: equipment must be properly programed inasmuch as its performance depends entirely on what is put into the machine. The pressing need for adequate educational "software" to be constructively employed by the new machines was repeatedly stressed. Moreover, equipment is still highly developmental and experimental. Most witnesses cautioned about the need for considerably more research and more imaginative use of existing techniques, as well as for the development of competence in programing.

FUNDAMENTAL PREREQUISITES

The testimony indicated clearly that the application of technology to education is in an elementary stage. Much programing of teaching devices was described as poor, and the equipment now in use apparently is still fairly primitive. There is great need for more research, not only on the application of technological devices, but also on the learning process itself. The subcommittee was impressed with the emphasis placed by most of the witnesses on the great need for knowing more about human psychology, particularly how the individual learns. In the circumstances, the formulation and adoption now by the educational community of guiding principles for development and application of educational technology would contribute immeasurably to health development of new systems and would help avoid waste of resources. A number of general problem areas were discussed in the course of the hearings.

For one thing, there is insufficient coordination between industrial firms which are developing educational equipment and machinery and the educators who are concerned with communicating knowledge and "opening the minds" of the young so that they may be prepared to originate and evaluate new ideas. It appears that the vital function of programing—preparation of the content of education—is falling too frequently to the "hardware" manufacturers when it should be handled by educational experts. What is needed is a better fitting of means to objectives.

Educational technology is now a major field of corporate research and investment. It is not only the business equipment manufacturers who are involved, but a great variety of corporations, many of them among the giants, ranging from steel and chemicals to publishing firms, who are directing their efforts more to the burgeoning education market. One witness stated:

> The American economy was built around the railroads in the last half of the 19th century, around the automobile in the first two-thirds of this century, and it will be built around education in the balance of this century.

What seems to be called for is broader and better research into the means whereby schools can be made more effective, utilizing the available range of technology, and taking full advantage of what we do know about the learning process. With this must come an establishment of institutions for coordinating the development and evaluation of new educational programs and equipment, thus permitting the schools to utilize them in the most effective way.

As of now, it is pretty much on a catch-as-catch-can basis between individual companies and individual school districts. By and large, educational systems throughout the Nation have little means of evaluating new developments, let alone obtaining and putting them to use. The result was described by a witness as "a shallow penetration by the technologists into education." Coordination would also make possible the development of systems—integrating a variety of mechanisms and skills—in order to achieve defined objectives in education. The so-called systems approach to defense production requirements has been an outstanding success and has involved a high degree of cooperation between large numbers of specialists and the producers of a broad variety of industrial skills and products.

At present, it appears that we do not have any established procedures for translating new techniques and technologies from the design stage to the classroom—at least not on an appreciable scale. Nor is there evidence of extensive long-range planning among educators themselves. Clearly there is great potential in the use of electronic and other modern communication skills to advance education. But before this can be done, there must be much more imaginative work done in matching equipment and capabilities to learners' capacities and aptitudes, as well as social objectives and individual needs. Witnesses stressed that this undertaking will require the best thinking of our culture and should enlist the combined resources of the schools, the universities, the industries producing educational technology, and related enterprises.

In essence, the potential contribution of technology to our educational needs will be governed by the following factors:

(1) Effectiveness of research in learning theory and its application to the development of education;

(2) Improvement of curriculum programing, particularly in respect to defining and meeting educational objectives;

(3) Organization of our school systems and intelligent planning of curriculum;

(4) More effective use of teachers; and

(5) Recognition on the part of teachers and educators of the great potential inherent in the new communications technology.

The foregoing requirements will be fostered by a cooperative participation of educational institutions, government agencies, and the affected private industry. They will have to collaborate both in planning and producing systems of technology that are geared to the genuine needs of the students.

ECONOMIC EFFECTS

Traditionally, education has not been capital intensive. Expenditures for the most part are in terms of salaries and other personal services. Capital investment has been almost wholly in real estate, furniture, and books.

The prospective increased use of expensive communication equipment and systems involves much greater capital investment in equipment, and the employment of technicians to install and maintain it. This is a new phenomenon in the field of education. Educators who think primarily in terms of operating costs for classroom teaching will be required to change their accounting notions to accommodate certain fixed costs for instructional equipment to be amortized over time.

It was indicated in the course of our hearings that experiments in the use of computer systems reveal that to receive widespread application the amortized cost of computerized instructional equipment should not exceed 25 cents per student-hour in elementary schools and 50 cents per student-hour for special education. Converting these student-hour costs into initial-capital costs, the experimenters have come up with a figure of somewhere between $2,000 and $4,000 per student console as the feasible price range. It was predicted that this price objective might possibly be reached in a few years. It was also estimated that after specific curriculum objectives are established, the proper programing of such equipment would cost approximately $4,000 to provide material for 1 hour for an average student. However, once invested, this sum could be spread over any number of students using it over a considerable period of time—provided, of course, the initial programing is done competently and is not rendered obsolete by extraneous developments.

Proper use of technology will call for the revamping of conventional organization and construction of schools. Significantly, new technology has brought about major revisions in the construction of industrial plants, as well as in their location, management, and mode of operation. Unless there are similar accommodations to new technology in the education field, our schools shall fail to achieve their true potential. Also, it should be noted that increased capital costs for schools will tend to widen the gap between the education offered by the wealthier school districts and that offered by the poorer school districts.

MANPOWER

A reassuring prospect on the educational scene is the outlook for an increase in the available supply of teachers, relative to demand. During the past decade there has been some improvement in the pupil-teacher ratio in both public and nonpublic schools, elementary and secondary. Recent studies indicate that for these schools in the decade ahead there will be larger numbers of qualified teachers in proportion to enrollments than at present.

For higher education, trends and prospects differ somewhat. The decade ahead is expected to bring an increase of about 3.8 million students, to an enrollment of 8.7 million in 1974. A continued shortage of teaching staffs is expected through 1970, as severe as that of 1960–65. After 1970, however, the potential supply of college teachers should be larger relative to enrollments. This result is expected because the rate of growth in enrollment will slow down and the output of doctors of philosophy will be expanded greatly.

These prospects for relative improvement in the number of qualified teachers, if realized, will relieve to some extent the pressures which might otherwise arise for introduction of new technological devices as a means of alleviating teacher shortages. Nevertheless, this development is not expected to reduce the importance of automation as a means to improve the quality of education and to permit more productive uses of teachers' time.

INFORMATION CENTERS

It was pointed out to the subcommittee that there is now no disinterested center of comprehensive information for educators about the availability and usefulness of new techniques and technology. There is no pooling of information, although there is obviously a great need among educators for some kind of clearinghouse to keep them posted on innovations. It was proposed that a major clearinghouse in the nature of a data bank be established to provide a registry of educational research and a file of completed research findings. Such an institution could also serve to make available an indexed locator file of educational programs, computer or otherwise, and possibly to store programs. It could act as a referral center for agencies and businesses to undertake development of specified programs and systems. Such an organization might also provide a useful source of stimulation to needed research and development and might maintain a file of experts and consultants. The subcommittee is impressed with the great value that might inhere in the establishment of a data bank of this kind, utilizing the most advanced data processing and communicating techniques and equipment.

SPECIAL APPLICATION: ADULT EDUCATION

The subcommittee is impressed with the fact that talking typewriters and other communications equipment now in the developmental stage are particularly well suited to teaching adults. They permit privacy of study and flexibility as to time and place of utilization. As one of the more immediate objectives of technological innovation, our Nation might well concentrate on the elimination of adult illiteracy. We know that illiteracy is a major drag on our economic progress and a heavy expense.

Several economic studies have established that higher education has a measurable economic value in our society—a value which generally takes the form of higher lifetime productivity and earnings for individuals with higher education than for those without it. Estimates relating to elementary and secondary education are more limited in scope, but studies in this area likewise suggest that schooling adds appreciably to individual productivity, and, earnings and yields a high rate of return on investments made by families and society in education.

Specific measurements of the costs of illiteracy and the benefits which might be gained from its elimination are not available, but it seems certain that elimination of illiteracy will prove a highly productive social investment for the United States. It would change people who are now a burden on the community into productive workers. Illiteracy is closely correlated with social maladjustment and is clearly an aggravant of social ills. Its elimination warrants high priority in the list of national objectives. It is a prerequisite to the effective elimination of poverty.

There are convincing indications that imaginative application of existing technology can do much to facilitate progress in overcoming illiteracy, and it is hoped that research and pilot projects will concentrate more on this subject than they have to date. Certainly, Federal aid programs in the fields of labor, manpower, welfare, poverty, and education should foster this objective. In these circumstances this subcommittee recommends that the administration marshal all available force promptly to eliminate this unnecessary and harmful blight, and submit to the Congress at an early date a coordinated program for achieving that objective.

GUIDING THE REVOLUTION IN EDUCATION

It is obvious that major corporations have moved into the field of educational technology and that in some cases, through default, they have taken over the crucial function of preparing the content of educational programs. The development of educational technology by corporations has produced a rash of mergers in order to combine skills and know-how to meet the needs of this newly developing market.

It is essential, of course, that the tremendous technical know-how of our society be directed toward solving problems in this area of great social need. There is danger, however, that many school systems and educational institutions may be committed for many years to unsuitable or inadequate teaching equipment and programs, simply because the large investments required to produce and install any equipment and program, and to train teaching personnel to use them, will preclude reconsideration of choices once they are made.

Options for change must be held open. It would be tragic if control of curriculum and the content of courses were to pass by default into the hands of large corporate producers in the "hardware" or "software" end of the business. Teaching aids and devices should be developed to meet explicit educational objectives and needs, rather than to broaden markets for particular products.

It is imperative that educators maintain and safeguard their proper role as formulators of educational policy. In the years ahead, it should be a primary concern of public policy to safeguard this role while promoting the utmost improvement of productivity in our educational programs through the studied application of the new technology.

[From Harper's, May 1964]

GIVE SLUM CHILDREN A CHANCE—A RADICAL PROPOSAL

(By Charles E. Silberman)

Can the nation afford a public-school system which is failing to educate between 50 and 80 per cent of its Negro and white slum children?

Horace Mann called education "the great equalizer of the conditions of men . . . the balance wheel of the social machinery."

The wheel is out of balance. As the one institution which every Negro and white slum child comes into intensive and prolonged contact, the public school offers the greatest opportunity to dissolve the cultural barrier that helps block their advance. But the opportunity is being muffed: no city in the United States has even begun to face up to the problem involved in educating the Negro or white slum youngster.

The root of the problem educationally is that the slum child does not learn to read properly in the first two grades. Whether because of this reading disability alone, or because of difficulty in handling abstract concepts that stem from independent causes, the slum child falls further and further behind after the third grade; the gap widens, and his IQ actually declines. His failure to read properly affects a lot more than his school work. It has a profound impact on how he regards himself and consequently on how he regards school. Poor reading skill at the start is the major cause of school dropouts and subsequent unemployment.

No informed person can believe any longer that the poor—or the Negroes specifically—are congenitally slow or illiterate. Yet we have had almost no success in combating this most crippling of a child's handicaps. Even the most well-intentioned and well-financed special program for the "culturally deprived child" serves to help only a small upper crust. New York City, for example, spends some $200 a year *more* per child in slum schools than in white middle-class schools. Yet with it all, third-grade pupils in the schools of central Harlem are one year behind grade level in academic performance; by the sixth grade, they have fallen nearly two years behind, and by eighth grade, two and a half years. And some cities aren't even making an effort. Chicago, for example, appropriates 20 per cent *less* per child in Negro schools than in white middle-class schools.

The reason we have failed is that we start much too late, after the damage is already done. Instruction in the first grade of our public schools takes it for granted that a child has completed a reading-readiness program in the kindergarten year. Yet only a small fraction of Negro or lower-class white youngsters attend kindergarten. Compulsory kindergarten undoubtedly would improve matters, but the basic problem would remain. That problem, stated simply, is that the environment in which lower-class Negro and white children grow up does not provide the intellectual and sensory stimulus they so desperately need. The result is that youngsters from impoverished backgrounds enter school lacking a great many skills which the teachers and the curriculum take for granted, and which most middle-class children have acquired as a matter of course.

A CHILD'S WORLD OF POVERTY

The slum youngsters, for example, may lack the sense of auditory discrimination—the ability to distinguish very subtle differences and nuances in sound—that is essential to reading. The noise level in a household in which a half-dozen people are living in two rooms tends to be so high that the child is forced to learn how *not* to listen; he develops the ability to wall himself off from his surroundings. Hence he fails to develop an ability to distinguish between relevant and irrelevant sounds, and to screen out the irrelevant. If, for instance, a truck rumbles by while the teacher is talking, the lower-class pupil hears only one big jumble of sound; the middle-class pupil has the ability to screen out the irrelevant noise of the truck and listen only to the teacher.

More important, the lower-class child has not had the experience of having adults correct his pronunciation; correction of baby speech and of mistakes in syntax on grammar is one crucial way in which the middle-class child learns the ability to distinguish subtle nuances of sound and language—"b" as opposed to "p," for example. In the case of the lower-class Negro youngster, particularly in families recently moved from the South, the problem is compounded several times over by the fact that the phonic system of the language he speaks is quite different from the system of the language which the teacher speaks and which the reading primers use.

The lower-class child, moreover, tends to have a poor attention span and to have great difficulty following the teacher's orders. The reason is that he generally comes from a nonverbal household: adults speak in short sentences, if indeed they speak at all, and when they give orders to the child, it is usually in monosyllables—"get this," "bring that." The child has never been obliged to listen to several lengthy sentences spoken consecutively. And the speech he does hear tends to be of a very simple sort from the standpoint of grammar and syntax. In school, the middle-class teacher who rambles on for several sentences might just as well be talking another language. The nonverbal atmosphere of the home also means that lower-class children have a limited perception of the world about them: they do not know that objects have names (table, wall, book), or that the same object may have several names (an apple is fruit, red, round, juicy). They also have very little concept of size or time.

The lower-class youngsters are poorly motivated, because they have had little experience in receiving approval for success in a task or disapproval for failure; but school is organized on the assumption that children expect approval for success. And since the parents, because of their general nonverbal orientation, do not ask the youngsters about school, the children have no way of knowing that the parents *do* very much want and expect success. For much the same reason, these children do not conceive of an adult as a person of whom you ask questions and from whom you get answers—yet school is based on the assumption that children who don't understand will ask. The middle-class mother, by contrast, is engaged in almost constant dialogue with her child. The slum child's home is characterized by a general sparsity of objects: there are few toys, few pictures, few books, few magazines, few of anything except people and noise. In one group of Negro children whom Dr. Martin Deutsch, director of the Institute of Developmental Studies of New York Medical College, has studied, 50 per cent said they did not have a pencil or pen at home, and about as many said there were no books or magazines. Their experiences outside the home are equally narrow; 65 per cent had never gone beyond a twenty-five block radius.

Given this poverty of experience, it is almost inevitable that the slum child will fail when he enters school. He simply has not been prepared to produce what the school demands, and by and large the school makes no attempt to adjust its curriculum to the realities of what its children actually know, as opposed to what they are *assumed* to know.

"THE CHILD IS FATHER"

So far, I have stressed the slum youngsters' failure to acquire a specific set of skills—auditory discrimination, sense of timing, etc.—which are prerequisite to learning how to read. The problem cuts far deeper than that. An impressive body of research in the psychology of cognition and perception as well as in the neurophysiology of the brain has made it clear that exercise of the mind early in life is essential for its later development. The human being is born with less than one third of the adult brain capacity, and there is tremendous growth of the cortex after birth. The way in which the cortex and, indeed, the whole nervous system develop is directly affected by the environment. Hence, mental alertness and in particular the ability to handle abstractions depend physiologically on a broad diversity of experience in the environment of early childhood.

"We know now," says Professor Jerome Bruner, director of Harvard's Center for Cognitive Studies, "that the early challenges of problems to be mastered, or stresses to be overcome, are the preconditions of attaining some measure of our full potentiality as human beings. The child is father to the man in a manner that may be irreversibly one-directional, for to make up for a bland impoverishment of experience early in life may be too great an obstacle for most organisms." As Bruner puts it, "supply creates its own demand"; in the phrase of the great Swiss child psychologist Jean Piaget, "the more a child has seen and heard, the more he wants to see and hear."

The problems Negro and other slum youngsters have in learning are no different in kind, therefore, and hardly different in degree, from those of any children coming from a culture of poverty. Thus, the analysis that Deutsch, J. McV. Hunt, and others have made of the reasons for the failure of lower-class children in school are virtually identical with the diagnosis Israeli educators have made of the reasons for the academic failures of the so-called "Oriental Jews"—children of immigrants to Israel from Arabic countries in North Africa

(Morocco, Algeria, Egypt) and the Middle East (Iraq, Yemen, Kurdestan). A sizable gap is evident when these youngsters start school: they score, on average, sixteen points lower on IQ tests than children coming from a Western European background. And the gap widens as they go through school; by age thirteen, the IQ differential is twenty-two points. Until remedial measures were taken, few went to high school, which is not compulsory, and hardly any to the university. Yet there could be no conclusion drawn about inherent inferiority; for a thousand years, the flowering of Jewish culture and learning was in Arabic countries. Studies by Israeli educators have pointed to the same reasons for these youngsters' poor academic performance: an impoverishment of environment—a lack of stimulation, particularly of the verbal sort, in the early years—which must be compensated for in some way if it is to be overcome.

STARTING IN NURSERY SCHOOL

Nothing less than a radical reorganization of American elementary education is necessary, therefore, if the schools are to begin to discharge their obligation to teach the Negro and white slum youngsters. To reverse the effects of a starved environment, the schools must begin admitting children at the age of three or four, instead of at five or six. The nursery school holds the key to the future—but a very different kind of nursery school from the one most Americans are familiar with.

It is between the ages of three and six that the battle is won or lost. "The two-and-a-half and three-year-olds are almost universally curious and friendly," says Dr. Ronald Koegler, a neuropsychiatrist at UCLA who is experimenting with a Montessori nursery program for culturally deprived children, "but by the age of six, the children are already different. The culturally deprived have already been deadened by their environment and are already so far behind the middle-class child that all the best elementary education will not be sufficient for them to catch up." Dr. Koegler may be exaggerating somewhat, but the point he is making is basic: the schools which wait until kindergarten or first grade will need to employ many, many more resources to do what they might do with comparative ease for children at age three and four.

By all odds the most important experiment in nursery education for Negro and white slum children is a research and demonstration project directed by Martin Deutsch in ten New York City public schools and five day-care centers. Deutsch's ultimate objective is to develop a standardized curriculum and a set of teaching techniques that can be used in similar programs anywhere in the country. (Some thirty cities are setting up, or talking about setting up, nursery programs for the culturally deprived, more or less modeled on the Deutsch experiment.) The curriculum is designed to teach the youngsters the verbal and perceptual skills they need in order to learn to read, and also to bolster their sense of self. There is a great deal of emphasis on teaching labeling—getting across the notion, first, that every object has a name, and, second, the more sophisticated concept that objects may have a number of different labels, each referring to different attributes. A teacher may use puppets or other replicas of people, animals, and objects to illustrate the story she is reading, to drive home the relation between people and things. Much use is made, also, of toys: stuffed animals, dolls, peg boards, color cones, to teach color, shape, and size. Auditory discrimination is taught through a tape recorder, in which background noise is used to mask a relevant sound; the level of the background noise is gradually stepped up, to enhance the child's discrimination. To help develop a sense of self, the rooms contain a great many mirrors; many children have never seen themselves in one. One of Deutsch's most successful techniques has been to take a photograph of each child and give a copy to the child and to the parent; 85 per cent of the youngsters had never seen a picture of themselves. The pictures were then used to construct a book about the class.

The physical arrangements of the classroom are planned carefully. The emphasis is on order, beauty, and clarity—on balancing color, physical objects, and space. This is important, Deutsch feels, because there is so little beauty and so little structure in the children's own lives. They respond amazingly to beauty. (Children will typically comment, "I wish I could live in this classroom," and older brothers or sisters in the same school will express envy at the younger child being in such an attractive room.) Each room is divided into a number of self-contained sections: a reading section with books, as well as tape recorders children can use on their own to play back a favorite story; a music section, with phonograph and records; an activity section with blocks and other toys involving motor skills and coordination. The sections are quite distinct—clarity is necessary, in Deutsch's view—but not rigid; they can be rearranged whenever desired. Each child has his own cubby to provide a sense of privacy and personal possession, both of which are difficult to find in a slum home.

THE ISRAELI EXAMPLE

It is not enough just to work with the children. Deutsch tries to work with the parents too—to win their trust, which is essential if the program is to succeed, and to give them some instruction in how to help their children. Once the former is done, the latter is relatively easy: once they have been persuaded that this is a genuine attempt to help their children, not a venture in brainwashing, the parents (or rather, the mothers—55 percent of the youngsters come from broken homes) are eager to get instruction. Deutsch and his staff suggest that the parents encourage the child to talk at the dinner table, especially about school, a completely novel experience to a great many parents; that they give him toys, praise his success—in short, let the child know that the parent wants him to succeed in school and is interested in what he does. This has enormous impact on the children's verbal ability, for they begin talking about school when they get home, instead of remaining mute; and it has profound effect on increasing motivation.

The youngsters in Deutsch's experimental classes show significant improvements in IQ test scores. The more profound effects may be less measurable, but they are striking to anyone who spends even a few weeks in one of the classrooms observing the children; they change under the observer's eye. Kindergarten teachers who receive youngsters exposed to even as little as six months of Deutsch's experimental program are almost speechless with enthusiasm. In all their years of teaching, they say, they have never had slum youngsters enter as well-equipped intellectually, as alert, as interested, or as well-behaved.

My proposal to extend public education down to the nursery level is not nearly as extreme as it sounds. Israel, with a standard of living only about one third that of the United States, has already adopted such a policy, and is in the process of establishing nurseries for the Oriental Jews as the means of acculturating its new immigrants in a single generation. The government has formally adopted a policy of preferential treatment, called "state protection." Compensatory education begins at the prenatal level, when amateur social workers visit the pregnant mother and the father; among other things, they teach the parents how to play with the children, and leave a set of toys which the government lends the family for a period of a year or so. The government is rapidly establishing free nursery schools so that the Oriental youngsters can begin school at three; the curriculum closely resembles the one Martin Deutsch is developing.

Help does not stop at that point, however. The Israeli educators have tried to isolate the critical points in intellectual development. The first is the nursery-school years; the second is the first and second grades, when the children learn to read. The Israelis are convinced that anyone, even the mentally retarded, can be taught to read. The problem, as Dr. Moshe Smilansky, Pedagogical Adviser to the Minister of Education puts it, is simply one of adapting the method of instruction to the state of development in which the child comes to school. Three years of intensive work have convinced the Israelis that 80 to 85 per cent of the Oriental youngsters can be brought up to the expected reading level.

The third critical point at which Israel's Oriental youngsters need help is the junior-high period (ages twelve to fourteen); they receive up to eleven hours of additional instruction a week, in order to help them adjust to the more complex curriculum they begin to receive, and to help them prepare for high school. In addition to the extra instruction given to all the Oriental youngsters, the government has adopted a separate program for the most academically talented: the top 25 per cent. The object, quite explicitly, is to encourage the development of an intellectual elite among the Oriental students—to create a group that will go through high school and the university without difficulty and then move into positions of responsibility in government, in business management, and in the army, thereby demonstrating to the rest of the Oriental community as well as to the Western Jewish community that Orientals *do* have the capacity to move to the top of Israeli society.

AN OLDER EXPERIMENT

One reason the Israelis have been so successful is that they have far greater administrative flexibility than we do in America; the director of research operates out of the office of the Minister of Education, so his research results can be immediately translated into administrative policy. The main reasons for success, however, is the commitment to the program of "state protection" at all levels of government. The officials in charge of the program (though needless to say, not all the teachers in the field) really believe that there is no inherent difference in intelligence between Oriental and Western youngsters—and that in any case IQ scores are meaningless as a guide to a child's potential.

This notion is crucial if any program is to succeed in the United States. The traditional American approach has been to see the child as a more or less fixed, static entity that has been determined by genetic environment. Hence, the emphasis on IQ: you have to measure what the child is before you can decide what to teach him, and how. The Israeli educators—and people like Deutsch, Bruner, Professor O. K. Moore of Rutgers, and Professor J. McV. Hunt of the University of Illinois, in the United States, as well as Montessori before them—see the child instead as an "open system." They are interested less in what the child *is* than in what he can *become*, and their goal is to provide whatever materials and techniques are needed to develop his intellectual abilities to the fullest. This is a far cry from the so-called "life adjustment" approach so popular in the United States a while ago; indeed, it is its very opposite, since life adjustment assumed irreversibility of a child's nature. The Israelis reject the idea that there is a point at which it is too late to help a child, though they agree that help is far more effective if begun in the nursery years. And they assume that intellectual development is a major source of mental health; children who receive an infusion of competence from the very beginning—who learn "I can" at the start of school—will tend to be stable, well-adjusted individuals as adults.

The Israeli example is by no means the only one. The first demonstration of the value of early childhood education in reversing the effects of poverty occurred nearly sixty years ago, when the Casa dei Bambini was established in a Roman tenement by Dr. Maria Montessori, one of the towering figures in the history of education, and one who is just beginning to be appreciated. Something of a Montessori revival has occurred in the United States in recent years, and several experiments using her methods are in process.

The Montessori approach may be particularly relevant to our own time for a number of reasons. It emphasizes what psychologists call *intrinsic* motivation—harnessing the child's innate curiosity and delight in discovery. Each child is free, therefore, to examine and work with whatever interests him, for as long as it interests him, from the materials that are available. What is available is determined by the Montessori concept of "prepared environment," which places great stress on training the sensory processes: cognition is enhanced by providing appropriate stimuli to *all* the senses.

The chief advantage of the Montessori approach, in the opinion of J. McV. Hunt, is that "it gives the individual child an opportunity to find the circumstances which match his own particular stage of development." It has the corollary advantage of making learning fun, whereas the conventional American approach to kindergarten and elementary education manages to establish remarkably early the notion that learning is unpleasant. ("Let's stop playing with the blocks now, children; it's time to learn our letters.")

As in Israel, help for our underprivileged cannot stop with creation of a nursery program, though such a program is crucial. The cultural distance between the school and the community, and the disorganization of Negro and slum life, means that a great many lower-class youngsters will need extra help all the way through school, and especially in the early grades. It may be useful, for example, to provide them with texts that offer a better bridge between their own lives and the rich world of Western civilization than, say, the almost universal "Dick, Jane, and Sally" series of reading primers. Unfortunately the first experiment in creating an "integrated" series of reading primers—*Play with Jimmy, Fun with David*, and *Laugh with Larry*, written by staff members of the Detroit Public Schools, moves in precisely the wrong direction. The books show a well-scrubbed Negro family in the same sort of antiseptic suburban environment that Dick, Jane, and Sally play in, and the level of prose almost makes the Dick, Jane, and Sally readers sound like poetry. (The Detroit readers use a much smaller vocabulary; the Detroit experts made tape recordings of Negro children's speech, and discovered that their vocabulary contains only about half as many words as white children's.) There is some reason to assume, however, that what these youngsters need is stimulus to the imagination—some evidence that reading is a means of escaping the confines of the slum for something more exciting than a backyard barbecue or a trip to the supermarket.

IMPLEMENTING THE IMPERATIVE

Current dogma, of course, condemns any program of compensatory education, no matter how massive, as a return to "separate but equal," hence an expression of prejudice. But one group of Negro leaders, headed by Professor Kenneth Clark and the Reverend Eugene Callender, has already had the courage to face up to the realities of the education problem in central Harlem. Their views are expressed in a report issued by Harlem Youth Opportunities Unlimited, Inc. (HARYOU), a group set up with funds from the President's Committee on Juvenile Delinquency and Youth Crime.

The authors mince no words about their belief in integration and their distrust of many of the measures taken so far. But their proposition is "that this vicious cycle of educational inefficiency and social pathology can be broken only by instituting an educational program of excellence in the schools of deprived communities," and their most important recommendation is a proposal to establish compensatory nursery programs for all Harlem children. In the long run, they argue, excellence requires an end to segregation. But in the short run—"during that period required to obtain more adaptive, democratic, nonsegregated schools for all children"—compensatory education is necessary, for 50 per cent of the junior-high-school students need massive remedial work if they are to be brought up to grade level.

Integration is a moral imperative—the greatest moral imperative of our time. It is essential not so much for Negroes as for whites, who must learn to live in the great world in which they are the minority. But merely throwing white and black students into the same classroom without regard to differences in knowledge and academic performance does not constitute integration in any meaningful sense. How are we to achieve meaningful integration—which leads to genuine contact, to real communication, and to understanding of each group by the other?

The only honest answer is that genuine integration will not be possible until the schools in Negro neighborhoods, and the schools in white slum areas as well, are brought up to the level of the very best in the city—until the schools do their job so well that children's educational performance will no longer reflect their income, or their social status, or their ethnic group, or their color.

To say this is not to suggest indefinite postponement, but to demand that the public schools stop dithering with projects and demonstrations and turn immediately to the most pressing task. Neither the large cities nor the nation as a whole can afford a public-school system which fails to educate between 50 and 80 per cent of its Negro and white slum students.

(Reprinted at the request of Responsive Environments Corporation)

A REPORT ON THE FREEPORT PUBLIC SCHOOLS EXPERIMENT ON EARLY READING USING THE EDISON RESPONSIVE ENVIRONMENT INSTRUMENT

(By John Henry Martin*)

PREVIEW

Twenty kindergarten children, five year old, were taught to read on Edison Responsive Environment machines over a period of five months. The level of reading proficiency for the group as a whole was near second grade at the close of the experiment in June 1964. The average time of exposure to the automated self-instruction was less than thirty hours—ranging from twenty-two to thirty-six hours per child. One of the peculiar virtues of the E. R. E. machine is its capacity to provide tutorial attention and response to every action of a child: Instrumentation such as the E. R. E. can help significantly to solve many of the problems in the public schools today.

BACKGROUND AND SETTING

In the summer of 1963 the Thomas A. Edison Laboratory and their associates, the Responsive Environments Corporation, invited the Freeport Public Schools to conduct an experiment to determine the validity of their E. R. E. Instrument as a teacher of reading to kindergarten and mentally retarded children.

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* Now Superintendent of Schools, Mount Vernon, New York.

After discussions with the Commissioner of Education for the State of New York, Dr. James E. Allen, Jr., and members of the State Department of Education, it was decided to proceed on a local basis with some State research funds being made available if needed. The Freeport Board of Education supported the entire project without stint and with unanimous agreement.

Freeport, Long Island, is a suburban village of 40,000 population some 35 miles from New York City. The public schools have a population of 7,000 with approximately 4,000 in five elementary schools. In July 1963, the Board of Education directed that a sixth elementary school, over 90% Negro, be closed, and the children be distributed to the other schools in the district. The Atkinson School where this experiment was conducted, one of the five remaining schools with a population of over 600 children, thus became approximately 20% Negro. This school contained the only classes in the Freeport Schools for mentally retarded children of elementary school age. Thus, the Atkinson School made available a comprehensive sample of a general public school population.

Its four kindergarten classes divided into two morning and two afternoon groups contained 115 children. The one primary class for mentally retarded consisted of 14 children.

THE EXPERIMENT

A statement of the problem was: "Could a technological device teach five-year-olds to read?" Simple analysis of the problem revealed several subsidiary questions. Over what intelligence range would the instrument have any consequences? Would Negro children from a recently closed segregated school respond? Would mentally retarded children learn to read from an instrument?

Twenty-two children were selected, eleven for each of the two available machines. A matching control group was simultaneously identified. These groups were matched over a range of criteria covering age, sex, race, intelligence, left and right handedness, hearing, vision, language maturity, and socio-economic status as measured by parental job classification. Binet intelligence tests were made of every individual in the experimental and control groups by qualified psychologists. All pretesting was completed in November 1963. By June 15, 1964 two subjects were lost to the experiment by moving from the district.

THE CLASSROOM ENVIRONMENT

Two years ago, the kindergarten teachers were invited by the supervisors of reading to use reading materials within the regular program of their classrooms. It was generally agreed that too doctrinaire an adherence to child development views in the past had isolated some able kindergarten children from learning to read. In the kindergartens of the Atkinson School were two mature and superior teachers each with more than ten years of teaching experience, with advanced degrees in elementary school education and reading. Both classrooms were richly equipped and were well supplied with materials of instruction.

THE CONTROL GROUP

Under these circumstances the general assumptions underlying a control group could not obtain. It became apparent that our control children would not be in a standard kindergarten where formal or informal reading instruction would not take place. Nor would it be possible to isolate our experimental group from some exposure to classroom instruction. It was possible to anticipate that a reverse Hawthorne effect could develop. At the Hamden Hall Country Day School, Hamden, Conn., where O. K. Moore conducted the first research into the applied theory which led to the development of the Edison instrument, one or more members of the teaching staff were reported to have revealed competitive antagonism to the withdrawal of their children to receive half-hour reading instruction in Professor Moore's research program. Similarly, in the year and one-half before the automated Edison instrument had appeared, Moore-trained reading teachers from the Freeport staff had observed the same reaction when they taught children to read from regular kindergarten and first grade rooms using a modified electric typewriter in a tutoring situation identical to the Moore pattern. Under these circumstances it was reasonable to expect that the arrival of technological instruments of a complexity never before seen in a common school would generate competitive anxieties in teachers possessing a high degree of professional competence and pride. We were not to be disappointed.

Faced with these situations we could not offer the control subjects a "placebo" of nothing while we administered a new E. R. E.—medication to the experimental group. Rather, we were confronted with the difficult situation where we could be reasonably certain in advance that our control children would receive the best primary reading program that stimulated teachers could devise while maintaining the best aspects of a good child-centered kindergarten. Nor would the research picture remain clear of the effects upon the experimental group of their being withdrawn from their kindergartens daily for one-half hour or more (approximately one-quarter of their day), to return to some incidental exposure to the reading instruction being given tutorially and in small groups to the other children in the class. We recognized that until pre-school children from essentially impoverished environments without tutorially minded parents are used as experimental subjects we shall not be able to completely eliminate certain factors which influence results.

But given these circumstances, which in one form or another affect all studies conducted within social institutions, our results would have to be examined against a restatement of the purpose of the experiment. "Could the E. R. E. instrument teach children to read better than a matched control group who would be taught to read under the best of conditions through the use of regular reading materials and procedures?" In effect, it was possible to anticipate that the normal Hawthorne affect which stimulates the participants in an experimental situation to higher energy output (because of the sense of being part of something special) would in this situation more likely accrue to the control children and their teachers to a degree seldom found or accounted for. On the contrary the sense of being "special" would occur to our experimental group as well. Albeit, that they would be the ones who would leave their classes to go to a distant room voluntarily to enter an isolation booth to play and work with a "talking typewriter."

THE NATURE OF THE E. R. E.

The Edison Responsive Environment Instrument, E. R. E., is a computerized typewriter that reproduces several of the sensory responses of a human being. That is, it talks, it listens, it accepts, it responds, it presents pictorial or graphic material, it comments or explains, it presents information, and it responds to being touched. It can be orchestrated to do each of these things in a straight line sequence or in planned parallels of these different sensory behaviors.

For the purpose of this experiment very limited exploitation was made of the instrument's capacities. We frankly have only now, after five months' work, gained some insights into "feeding" the mouth of this benign and neutral machine. Programming, as the term is currently used, is largely a linear concept of the presentation of printed material in planned sequences with or without pictorial material, with or without audio and with or without branching materials based upon a limited anticipation of the learner's responses. The E. R. E. differs from this concept of programming analogously to the difference between an old-time player-piano and a symphonic orchestra which has been computerized. The first is a mechanical device which can be activated by punched rolls of paper. The second will make different instrumental sounds to produce a symphonic effect as simply or complexly as the score which can be written to activate it. In other words, the E. R. E. is not fixed to any sequence of behavior or responses. The key to a fuller utilization of its many capacities will come from seeing it as *Multi-Sensory Methodology open to simple and varyingly complex behaviors as well as responses from the learner who uses and controls it.*

E. R. E.—A WORKING DESCRIPTION *

A few examples to illustrate the Multi-Sensory Methodology capabilities of E. R. E. are:

In its simplest operation, the depressing of any key by the pupil will result in the immediate pronunciation of the particular key-symbol and also in the instantaneous typing of that symbol on the typewriter paper in extra large type-style.

Not only must the keyboard be "jam-proof" but, most important, once a key has been depressed, no other key of the total keyboard can be depressed until the audio-pronunciation is completed. Otherwise, this would lead to "wild-typing" and jibberish audio pronunciation.

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*This section appropriately was prepared by Richard Kobler, the technical creator of the Edison Responsive Environment Instrument.

Even in this simple form of operation, a number of variations were proven to be essential; of particular importance is the ability to pre-record the keyboard in "several languages" even for the teaching of reading and writing of the "natural language." In order to teach sound analysis of the spoken word resulting in written (typewritten) symbols, one should be able to record the alphabet-keys in their phonetic equivalents as well as their letter-names. For example "t" (tee) or "t." A third variation may consist in the combining of phonetic equivalents and letter names, such as "tee-t." One must be able to switch from one language to the other effortlessly dependent upon the student's own requirements.

It is further necessary to be able to delay the audio response to give an advanced student an opportunity to "beat the teacher" with the pupil's own pronunciation of the key-symbol.

In an advanced stage of teaching, E.R.E. adds to these functions the visual exhibition and accompanying audio explanations of single letters, words, sentences, and stories. The Pointing Mechanism must be such as to gradually expand the visual focus of the pupil: thus, single letters can be exposed and pointed to, either in complete isolation or gradually coupled with other letters to form words; later on, a whole printed line is exposed, and lastly, several lines may be exposed.

Probably one of the most important features of the E.R.E. System is the fact that any symbol pointed to by E.R.E. is also "encoded" in its keyboard. This means that this particular key is the *only one* which can be operated by the pupil and which will type its symbol on the typing paper, while all other keys are inoperative (blocked).

Because incorrect responses cannot be completed on the "blocked" keyboard, this approach has aptly been called the "trial and success" method.

A typical operation would be for E.R.E. to point out a particular letter, to pronounce this letter to the pupil, and to free the one single, particular key corresponding to this symbol for manual operation by the pupil. The moment the pupil depresses this key, the pointer will move to next symbol, pronounce it, and free the corresponding key on the keyboard. Here, again, it must be possible for the E.R.E. to pronounce symbols in the before-mentioned two or three modalities (letter names and phonames) dependent upon the program.

Suppose that E.R.E. is pointing to a letter, has pronounced it, and has freed the corresponding key for operation by the pupil. If at this moment, the child's mind "wandered away," a *stalemate* between child and instrument would develop which would call for the intervention of a human teacher and probably end in the termination of the pupil's session with E.R.E.

E.R.E. avoids such a stalemate by audibly repeating the pronunciation of the last letter every few seconds until the pupil operates the corresponding key.

As the pupil proceeds from letters to words, *an additional* audio system takes over which, although it can be programmed to take effect *at any* time or special point of the program, is frequently activated when the "space-bar" is depressed by the pupil. Since the depression of the "space-bar" indicates the end of a word, E.R.E. will at that point pronounce and spell the word just typed. Similar rules hold true of the audio-recapitulation of a total sentence after "period" and even of total paragraphs or stories.

Usually after the pupil has become familiar with a number of words, the audio pronunciation of *individuals letters is cut out* because pupils want to proceed at a faster pace and start to resent audio repetitions of things they know in whole word form.

At this point we shall give another example of the *purposeful withdrawal* of a sense-modality (the withdrawal of a "letter audio" was one example). This time we shall *cut out the visual exhibition* of words or sentences and E.R.E. must be able to *ask the pupil* to type certain words or letters based only upon the pupil's audio-reception. This of course is "writing" and furnishes proof of the pupil's absorption of material. The only "help" given is that the keys are sequentially encoded.

Finally, in order to give precisely controlled "gestalt-illustrations" of orthographically presented materials, pictures can be shown to the pupil in close relation to the rest of the program. This is accomplished through an automated rear-projection-instrument built into E.R.E.

As powerful as these multi-sensory, synchronized activities of E. R. E. may be, they frequently are insufficient, if it were not for the ability of E. R. E. *to record* *the pupil's voice and to automatically play it back to him* in such a manner as to compare his own talk with the *models prerecorded in the E. R. E. System.* All these functions have to be totally synchronized with all other visual and audible as well as tactile stimuli. Having built a word from its visual, tactile, and audible components, having summarized it phonetically, having spoken it and compared it with the pronunciation of the E. R. E., a perceptual ring has been closed which not only results in the learning of the *reading* skill of the natural language, but also in the *writing* skill, based upon the *phonic analysis* of the pupil's speech and therefore results in a *re-learning of the spoken natural* language on a higher plane.

All of these functions must be easily programmed by electronically and mechanically unskilled personnel. The mere typed copy of the text of a card by an attendant and the operation of a few auxiliary keys will automatically program E. R. E., using a simple card containing not only the visual information but the total encoded program as well as all audio explanations. Each single card may contain as many as 120 words accompanied by 20 minutes of audio explanations.

TESTING SCHEDULE

Because the delivery of the two machines was originally scheduled for December 1963, the pre-test data on the children was undertaken in November 1963. At that time the experimental group was fixed in size at twenty-two, the estimated capacity of the two machines in the typically short kindergarten school day. Among the tests used to establish the equivalency of the control group were the Binet I.Q.,[1] and two reading tests, the Lee-Clark,[2] and, the Wide Range Achievement Tests.[3] The I.Q. distribution of both the experimental and the control groups ranged from the 140's to the 50's. The original groups were arranged in matched pairs in five categories of intelligence from Superior (120–140), Bright (112–118), Average (90–107), Dull (80's), to Retarded (50's to 70). The forty children who remained in June 1964, divided into twenty Experimental and twenty Control, were distributed in threes, fours and fives in each of the above five intelligence categories.

The scores achieved on reading tests in November 1963 were used to refine the matching of the pairs and the total group, and to provide the bases for comparative measures.

Final testing was done during the weeks of June 8th and 15th, 1964. At that time, the Gates reading test was administered to both groups.

THE ADMINISTRATIVE PROGRAM

The twenty-two children in the experimental group, eighteen from four different kindergartens, and four children from a special primary class for mentally retarded children, came voluntarily for thirty-minute sessions, the maximum time permitted to work with the two E. R. E. instruments. After the first introductory week, the children left their rooms and found their way to the second floor classroom into which had been built two demountable, sound and air-conditioned, plywood booths approximately eight feet in cube that house the E. R. E.'s and provided isolation from distraction and adult intrusion. The booths were monitored through one-way vision glass and intercom phones by trained teachers or clerks.

Training of the adults consisted primarily in teaching them how to establish a non-directive relationship with the children. Children could signal a desire to leave the booths or ask a question by raising a hand. Prompt response was expected and given provided it was non-instructional. Special note should be made of the successful effort to produce a calm and tranquil atmosphere in the experimental center. Mrs. Dorothy Johnson, Director of Primary Reading in the Freeport Public Schools, as well as Associate Director of the E. R. E. Project, not only did this, but in her manner and person contributed beyond measure to every aspect of the program. No one ever spoke in loud tones. Hurry was forbidden. A generally pleasant hush was maintained in order to keep the children in a neutral atmosphere. We wanted neither tensioned-fright nor over-stimulated excitement. The staff achieved this goal despite the almost continuous flow of visitors.

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[1] The Revised Stanford-Binet Intelligence Scale, Sec. Ed.

[2] Reading Readiness Test, Kindergarten and Grade 1, 1962 Revision, California Test Bureau Publishers.

[3] The Wide Range Achievement Test, Published by the Psychological Corp., 5th Avenue, New York, N.Y.

RESULTS—A SUMMARY OF THE STATISTICAL ANALYSIS* OF THE TEST DATA

A statistical study and analysis of the data was made by Dr. Frederick L. Matthews, of STACO, Williston Park, New York. A brief summary follows: Dr. Matthews found a correlation of 0.977 between the I. Q. test scores administered in November 1963 with those given in June 1964.

In an effort to determine which of the three post reading tests administered was most significant, factor analysis was used.

The test with the highest communality was the criterion employed, i.e., the test with the highest correlation with the other two was presumed to be the best.

The Gates Test had an $r=0.8$ to Lee-Clark
$r=0.8$ to Wide-Range

When Gates was eliminated the correlation of Lee-Clark with Wide-Range was 0.35. On this basis Gates was the best criterion

When the same procedure was used with the Pre-test results the correlation between the Binet and the Lee-Clark was 0.27 and with the Wide-Range, it was −0.36. Essentially the correlations between the I. Q.'s and the pre-test-reading tests were zero. The correlation between Lee-Clark and Wide-Range was 0.42.

On the basis of the Lee-Clark pre-test data and the Gates post-test results a regression line was graphed, using the least squares method. The actual scores were found to range on either side of the regression line in a normal bell-curve of distribution. The same procedure was duplicated for the control group. No significant difference was found in the slopes. The slope of the experimental group was 0.021778 and that of the control group was 0.0180 *with 1.7 months difference in favor of the experimental group scores.*

To test the significance of this difference, Dr. Matthews pooled the two slopes equal to 0.0199456 and found that the mean of the experimental scores lay outside the confidence limit of the controls. That is, the mean of the experimental scores exceeded over 90% of the scores achieved by the control group.

Using the "chi" or "goodness of fit" test to test the assumption in the preceding statistics of normal distribution in determining the accuracy of the means, the results were identical.

To subject the data to another test, the regression lines were divided into three equal parts using variance analysis on each part in each group to check the linearity of each regression in each part. The results were remarkably consistent.

One more statistical procedure was applied to the data. The statisticians simulated an argumented group by random numbers with replacement to show how big a sample would be needed to produce a significant difference in the slope. He found that control and experimental groups of 75–100 each would do.

OBSERVATIONS

1. The E.R.E. Instrument has scarcely been exploited as a Multi-Sensory Methodology of teaching.
2. The material prepared during this project for the instrument represents less than twenty hours of instruction time. There is subjective evidence to indicate that only a fraction of these cards carried the major burden of the learning consequences.
3. Additional research is needed to explore the coordinations of the various sensory modalities of the instrument.
4. Exclusive E.R.E. instruction of the very young should produce results superior to those presented here.
5. The predictions that children over four would do poorly with the instrument were not substantiated by our findings.

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*The use of a series of statistical techniques more complex than normally expected for a study of such numbers in addition to the simpler procedures also employed was deliberately done to apply the severest of disciplines to the results. We recognize the possible criticism of using heavy artillery instead of small bore shotguns.

6. The one case of the 18-year-old Negro boy with a "sight reading vocabulary of less than thirty words" three months ago, who now reads as the unique contribution of the E.R.E., is not generalizable. But the temptation and need to test this field is as immense as the problem.

7. Certain techniques are of importance and were too little used in this project. Desk top slates for tactile confirmation of letter and word learning are of presumptive value. Books distributed to the participants early after their exposure to the instrument should add to the consequences if the one-week experience at the end of this project is an indicator.

8. There is strong subjective feeling that the E. R. E. may make its greatest contribution as a rapid, three to five months "gestalt-producer" for early reading. Our associate director, chief psychologist, and the other research personnel associated with the project, all suggest that long drawn-out reading programs may be overlooking the phenomenon that learning to read well is the consequence of *early success* followed by much reading.

CONCLUSIONS

1. The E. R. E. Instrument taught within five months (actual time at instrument ranged from 22 hours to 36 hours) twenty kindergarten and mentally retarded young children to read significantly better than twenty children carefully matched by a series of criteria who were taught by enriched traditional reading methods.
2. The children with less intelligence scored as significantly superior as did the brighter children.
3. Negro children in the group were indistinguishable by their scores from the remainder of the group.
4. Sex differences were not apparent in the scores.
5. The mean difference for the experimental group in reading score at the end of the five month period was 1.7 months over the control group.
6. There is evidence to indicate that the difference between the experimental group and the control group would have increased had the experiment continued.

EXTRACT FROM A REPORT BY DR. LASSAR G. GOTKIN TO DR. MARTIN DEUTSCH BOTH OF THE INSTITUTE FOR DEVELOPMENTAL STUDIES

"Our initial experiences with the machine suggest that we have underestimated its potential as both a research instrument and an instructional device. We have made a major change in the use of the machine. To date, the children using the machine sat in an enclosed cubicle completely isolated from any stimulation other than the machine itself. This approach, in harmony with some Skinnerian concepts, seems to be central to Moore's conception of responsive environments. While much in sympathy with the conceptual framework which emphasized removing the learner from irrelevant stimulation that would interfere with learning, I had decided to do away with the booth for practical reasons involving full school use of the equipment. Richard Kobler and I corresponded about the matter and especially my suggestion that earphones could make up for a major portion of the booth's isolation.

"The shocking observation that we have made this summer in using the machine with five-year-olds without the booth and without the earphones is that they attend to the machine despite a variety of stimulation that would distract even a motivated adult. The incident that highlighted this condition occurred during a time when there were six observing adults in the room and bedlam outside in the schoolyard were 200 children were cheering relay races. During this time the children worked on the machine as if it were perfectly quiet and no one was there. The importance of this observation is relevant in terms of the many observations made that children from socially disadvantaged environments have attentional problems.

"As we have been working with children from disadvantaged backgrounds in classroom settings we often encountered the issue of attention span. The second observation that has been most impressive in our initial work with the children on the machine has been that they have worked a minimum of fifteen minutes at a sitting and it has been our job to terminate the lesson. We have seen no evidence of boredom nor has any child exhibited anything other than intense interest."

(Responsive Environments Corporation)

[Reprinted from the New York Times, Friday, March 12, 1965]

Computerized Typewriter Leads Schizoid Children Toward Normal Life by Helping Them To Read

(By Ronald Sullivan, Special to The New York Times)

Cooperstown, March 10—A computerized typewriter has been credited with remarkable success at a hospital here in radically improving the condition of several children suffering an extremely severe form of childhood schizophrenia.

No one has fully explained or accounted for the change in the children's condition. No one ever mentions the word cure. Nor does anyone say that a machine has succeeded where psychiatry apparently has not.

All that is said is that one of the children, who was on his way to a state mental institution, is now going to public school after having been given up as a hopeless case one year ago. Several other children have shown similar progress.

What has particularly amazed a number of psychiatrists is that the children's improvement occurred without psychotherapy; only the machine was involved.

MACHINE ALMOST HUMAN

It is almost as much human as it is machine. It talks, it listens, it responds to being touched, it makes pictures or charts, it comments and explains, it gives information and can be set up to do all this in any order.

In short, the machine attempts to combine in a sort of science-fiction instrument all the best of two worlds—human and machine. It is called an Edison Responsive Environment Learning System. It is an extremely sophisticated "talking" typewriter (a cross between an analogue and digital computer) that can teach children how to read and write.

The instrument has been used successfully in teaching 5-year-old kindergarten children how to read after only 30 hours at the typewriter over a five-month period, without any formal instruction from teachers.

HOW IT WORKS

The computerized typewriter allows its user to explore freely. It has infinite patience. There are no punishments when a wrong key is punched. There is no competition. It has inflexible logic. It never varies. It never, never makes a mistake.

The machine consists of a computer about the size of a small, upright piano with a typewriter keyboard in front. It has a speaker and a frame above the typewriter for printed matter.

The first thing a child does is press one of the standard typewriter keys. This prints the character in large type. At the same time, a soft voice automatically identifies it through the speaker.

The computer can be programmed vocally and visually, or both together. When a letter is selected by a recorded voice, all the remaining keys are locked. The machine waits indefinitely while the child punches away until the right key is hit before it calls automatically for the next one.

Then letters lead to words and words to sentences. Sentences lead to stories.

IN RURAL HOSPITAL

The machine was conceived by Dr. Omar Khayyam Moore, a behavioral scientist and a professor of psychology at Rutgers University, and developed by Richard Kobler of the Thomas A. Edison Laboratory, West Orange, N.J.

It was installed here inside a sound-proof booth at the Mary Imogene Bassett Hospital, long considered one of the best rural hospitals in the country.

The two persons who are responsible for getting it here are two staff members, Dr. T. Campbell Goodwin, head of pediatrics, and his wife, Mary, who also is a pediatrician.

A number of the children who have used the machine since it was installed a year ago have been diagnosed as suffering from autism, a baffling and distressing form of childhood schizophrenia that thus far has defied any kind of psychiatric treatment. There is no known cause or cure.

Autism is general described as a severe emotional disturbance marked by such pronounced symptoms of profound withdrawal, mutism, strange language behavior, uncontrolled weeping and rage, violent tantrums, wild fear, trancelike fixations of inanimate objects, animal-like behavior and several patterns associated with mental retardation.

Dr. Mary Goodwin is a handsome woman who, with her husband, has been fighting for nearly 20 years to improve rural treatment facilities for handicapped and retarded children.

Although she believes that what has happened to the autistic children has been extraordinary, she is extremely wary of drawing any medical or psychological conclusions from her success.

With the winter hills south of Otsego Lake behind her, she said the other day: "All I can tell is what I have seen. We're not sure what has happened. We have a vague idea, a guess. We do know what these children were like when they began coming here last year. We do know what they are like now. The important thing is that this be followed up."

Dr. Goodwin has been specializing in remedial reading and therapy for handicapped and retarded children in a special wing developed in the rear of Bassett Hall, a large, Tudor building near the hospital that used to be a nurses home.

She first learned of Dr. Moore's work with the machine in 1961 when he was on the faculty of Yale University. At Hamden Hall Country Day School near New Haven, Dr. Moore demonstrated that very young children, when placed in a "responsive environment," were capable of extraordinary degrees of reasoning.

AVOIDS MISTAKES

Many times, this capacity seems to break down in adult communication with a small child. Thus, Dr. Moore conceived of a machine and an environment that could not make the mistakes adults did when dealing with children.

With her husband's encouragement and with funds made available by the hospital, Dr. Goodwin purchased a machine for $30,000 a year ago February. She reasoned that if it helped bright children, it might very well help handicapped and retarded children, too.

But she also had another idea. She had noted that one symptom of autistic children is a highly abnormal preoccupation with inanimate objects, particularly with anything mechanical. She thought that this preoccupation might be exploited with a machine.

The first autistic child to use the machine was a highly unmanageable, 6-year-old boy who had never communicated with anyone, including his family.

He was frightened, unkempt, wild and occasionally vicious. He was so disturbed that several psychiatrists had given up any hope for him and advised that he be sent to a state mental hospital.

The boy had never spoken to anyone and he never had been to school. Nevertheless, when Dr. Goodwin placed him inside the small room with the typewriter last May, he gingerly approached it and began to peck out a jumble of commercial brand names advertised on television.

He has since used the typewriter nearly three times a week. Gradually he has begun to respond. Robert D. Seaver, a former teacher with five children of his own and who now works with Dr. Goodwin, said:

"The boy sees me now. He never did before. He responds to me. He responds to others. We know he is far from cured. But his parents are now thinking in terms of school for him instead of custodial care by the state."

Mr. Seaver described another boy who was 6 years old like the first and who likewise was diagnosed as autistic. He had been removed from kindergarten because he had become a menace to himself and to other children. He was extremely disturbed and his condition was getting worse when he began using the machine.

Now, after nearly a year with the typewriter, he is back in school.

A BOY'S PROGRESS

Another boy who was 9 could only make infantile sounds when he began punching out gibberish on the machine last April. Now he can read sentences. He speaks, plays and continues to make progress. He had been considered a virtually hopeless case.

A small group of boys were taken from a state mental institution last summer and began using their arms, elbows and noses on the machine. They were considered representative of the most severely disturbed in their institutions.

One was a 14-year-old who had not spoken since he was 3 or 4 years old. Despite intensive psychiatric care and extensive psychotherapy, he had deteriorated to the point of being catatonic.

By last November, the boy had begun to initiate simple activities, express himself vocally where he had only made infantile expressions before. He can now pronounce and write his name.

Other children made similar advances.

All the while, Dr. Goodwin and her staff became tantalized with the progress they saw even though they could not explain it. They guardedly and tentatively attribute it to the fact that the machine has removed the human factor in communications

WARY ON FINDINGS

Mrs. Goodwin is wary of discussing her work for publication because she is not a psychiatrist and her work has had none of the usual controls normally associated with research.

She hopes this will be done.

[For additional information contact Responsive Environments Corp., 21 East 40th Street, New York 16, N.Y.]

[From the Saturday Evening Post]

Omar Khayyam and His Talking Typewriter—A Miraculous Machine Teaches Two-Year-Olds To Read, Spell, Punctuate and Even Touch-Type in Less Than a Year

(By C P. Gilmore)

Keith Ross, a friendly, vigorous four-year-old, scrambled onto a chrome-tube highchair and stared quizzically at the odd-looking typewriter. The machine's keys, like the boy's fingernails, had been painted a variety of bright colors. While the boy looked nervously about him, the attendant on duty, a 20-year-old girl named Carol Peterson, told him to enjoy himself and to raise his hand if he needed help. Then, with no further instructions she left.

While Miss Peterson watched through a one-way glass, Keith extended a finger and gingerly touched the letter *M*. The machine typed the letter and at the same time, a tape-recorded voice lodged in its innards called out: "*M*." Keith's jaw dropped. He touched the *M* again; again the machine typed and spoke. A tiny smile crept across his face. He rapped out a line of *M*'s across a roll of paper. Then he began excitedly punching all the keys, always getting a response. "Oh, boy," he told Miss Peterson later, "am I having a good time!"

After slightly more than a week of daily 30-minute sessions, Keith had taught himself the keyboard letters and symbols and was even learning touch-typing by matching the different colors on his fingernails with those on the typewriter keys. At this point Miss Peterson adjusted a knob outside the booth. Now the machine announced a letter and simultaneously popped up a card with the letter on it *before* Keith struck a key. The boy quickly discovered that all the keys were locked except the one the machine was asking for. In a few days Keith learned to match all the keys with their sounds and images.

He got his next surprise when three letters—*M-A-Y*—appeared on a card at the same time. After Keith typed the letters, the machine paused and said *M-A-Y, MAY*. He typed a torrent of words that day; may, day, pay, way. He had just discovered that letters put together make words.

On his 16th day in the booth, Keith asked Miss Peterson to spell his name. "What letter do you suppose Keith starts with?" she said, accenting the initial sound heavily. Gradually, letter by letter, she helped him work out the spelling for himself. Keith advanced rapidly. By his third month, sentences like "Go real fast" and "Stop with your brakes" began to appear among the miscellaneous words, letters and numbers. Three and a half months after his first session with the typewriter, Keith typed his first original story:

"My supercrane picks up dirt. It has three batteries and a control with two buttons. It is fun to play with."

Keith, a four-year-old of average intelligence, had taught himself to read, write, spell, punctuate and touch-type. And he had accomplished all this in less than half the time it normally takes a first-grader to learn the same skills.

The scene of Keith's remarkable accomplishment was the nonprofit Responsive Environments Foundation, Inc., a reddish-brown, two-story nursery school in Hamden, Conn., a suburb of New Haven. Like other nursery pupils, the 20 children at Hamden spend two and a half hours each session painting, singing and playing games in a large, airy classroom. However, each child also devotes up to 30 minutes a day to what the youngsters call "the talking typewriter," and that daily half-hour session makes all the difference.

During the past five years some 400 children of all races, ranging in age from two to seven, in background from deprived to wealthy, and in ability from retarded to gifted, have chalked up impressive achievements with the talking typewriter. Two-year-olds exposed to daily sessions with the machine have romped through first-grade reading material before their third birthday. First- and second-graders write, edit and cut the stencils for their own mimeographed newspaper. "Sometimes typing tests disconcert me," wrote one child in the newspaper. "If it's too disconcerting you sometimes omit a few things. Then you may get into a predicament." One five-year-old felt called on to publish the following advice to a friend: "Pam, you could be a nurse someday. But when you be a nurse, you can not scream like you do now." Finally, standard tests given second-graders, who have been involved in the program for three years, show that they read, on the average, at the seventh-grade level.

The founder and director of this experimental—and highly controversial—school is Dr. Omar Khayyam Moore, a small, wiry 45-year-old professor of social psychology at the University of Pittsburgh. His major interest has for many years been in the esoteric field of symbolic logic, the study of the use of words and numbers to describe ideas and things. Some years back, Doctor Moore worked out a set of mathematical models showing how people learn; in 1958, while an associate professor at Yale, he began testing his ideas with an ordinary electric typewriter. His first subject was his own two-and-a-half-year-old daughter, Venn.

"Two weeks after Venn started," he recalls, "my wife and I could hardly believe it. 'My God, look at her go!' I said." Venn was reading and writing before she was three. Moore and an engineer then designed an ingenious machine that combined an electric typewriter, a miniature computer and a tape recorder.

The first large-scale test of this machine came in 1961, when the Carnegie Corporation of New York financed a three-year experimental project at a private school in Hamden. Whole classes of children from nursery school through the second grade participated, and the results were impressive. In 1964 Moore moved his Responsive Environments Foundation to its own building a few blocks away, where it now operates with small classes of preschool children as a demonstration and training center. Last spring schools in Mount Vernon, N.Y., successfully used one typewriter with 24 underprivileged four-year-olds and this fall leased four of the $35,000 machines. Currently both Mount Vernon and Freeport, N.Y., are seeking over two million dollars in federal funds to set up programs in their school districts.

Doctor Moore explains the typewriter's extraordinary success by pointing out that very young children become highly motivated to learn when they are allowed to make their own discoveries. He also feels there is no greater deterrent to learning than the fear of making a mistake. So the children discover that when they make an error, nothing happens. The typewriter never scolds; it is never impatient. (One child gleefully struck the asterisk 75 times in succession without the machine or attendant saying a word.) To further eliminate pressure, all typewriter work is completely voluntary.

Critics of Doctor Moore's ideas and methods rarely challenge the fact that children do learn from the talking typewriter, but they seriously question the advisability of such learning at an early age. Some educators even fear that early reading may cause eye damage that will not become evident until later. Others, such as Drs. Frances L. Ilg and Louise Bates Ames of the famous Gesell Institute of Child Development, call early reading "foolish and needless." Sue Moskowitz of New York City's Bureau of Educational Research adds, "Research proves that early readers don't generally read better later on than those who learn at the regular time. Pushing an unready child into formal instruction can create destructive feelings of fear, inadequacy and frustration."

Moore disagrees. To guard against physical or psychological damage, all children in his program are examined regularly by a pediatrician and a clinical psychologist. In five years no signs of physical or emotional strain have been detected.

To those who say early reading instruction can overwelm and frustrate a child, Moore replies that his preschool students actually develop a permanent zest for learning. Moreover, he claims that youngsters who go through his program do not get bored when they get into a regular school, even though they are usually far ahead of their classmates. "By this time they're self-starters," he says. "They don't have any trouble doing the regular work of the class, and they keep themselves occupied with special projects."

Of course, Moore's system isn't the only way to teach very young children to read. "People say that any good teacher, using conventional methods and giving children as much attention as we do, would get results," Moore says. "I would have to agree. We don't claim to have the only method, but we do claim to have a method that works."

"One advantage is that we don't need highly skilled booth attendants," adds Joseph R. Dunn Jr., who heads the school. "They have to be trained, but we can do that quickly. We're not dependent on crack teachers for our results."

Most of Professor Moore's work has been with normal preschoolers. This year, however, the school in Hamden began taking a few problem children. Among them was Bernard, an 11-year-old classified by school authorities as a nonreader. One day, after Bernard had spent about two weeks with the typewriter, the booth attendant found him perched excitedly on the edge of his chair.

As the machine called for a series of letters, Bernard typed each one and began to put the sounds together. Then, beating the machine by a split second, he shouted, "f-a-s-t, fast!" The glow on his face was one of pure triumph.

Moore's machine may hold unexpected promise for seriously disturbed children too. One six-year-old have never spoken, and several psychiatrists recommended that he be sent to a mental institution. In desperation, doctors at the Mary Imogene Bassett Hospital in Cooperstown, N.Y., decided to try the talking typewriter. The child seemed fascinated by the machine, and after several months he suddenly began to talk. He is far from cured, but it now appears that he may go to school instead of an institution. "The machine's potential may be even more enormous than we suspected," says Dr. Mary Goodwin, a pediatrician.

Perhaps the typewriter's greatest achievement is the way it allows a young child's imagination to soar by quickly and painlessly helping him overcome the reading and writing hurdle. Sometimes the child's creative imagination reaches truly wondrous heights, as in this story about Lincoln, written by first-grader Spencer Taylor for his school newspaper:

"Abraham Lincoln got shot. He was watching the hockey game at the fair. Someone had a gun. He shot Abraham Lincoln in the head. They stopped playing hockey and called the ambulance. It came rushing no matter if cars were in front of it or not. They shouted to the boss of the hockey game to call the police. They found the man with the gun."

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